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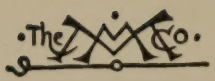
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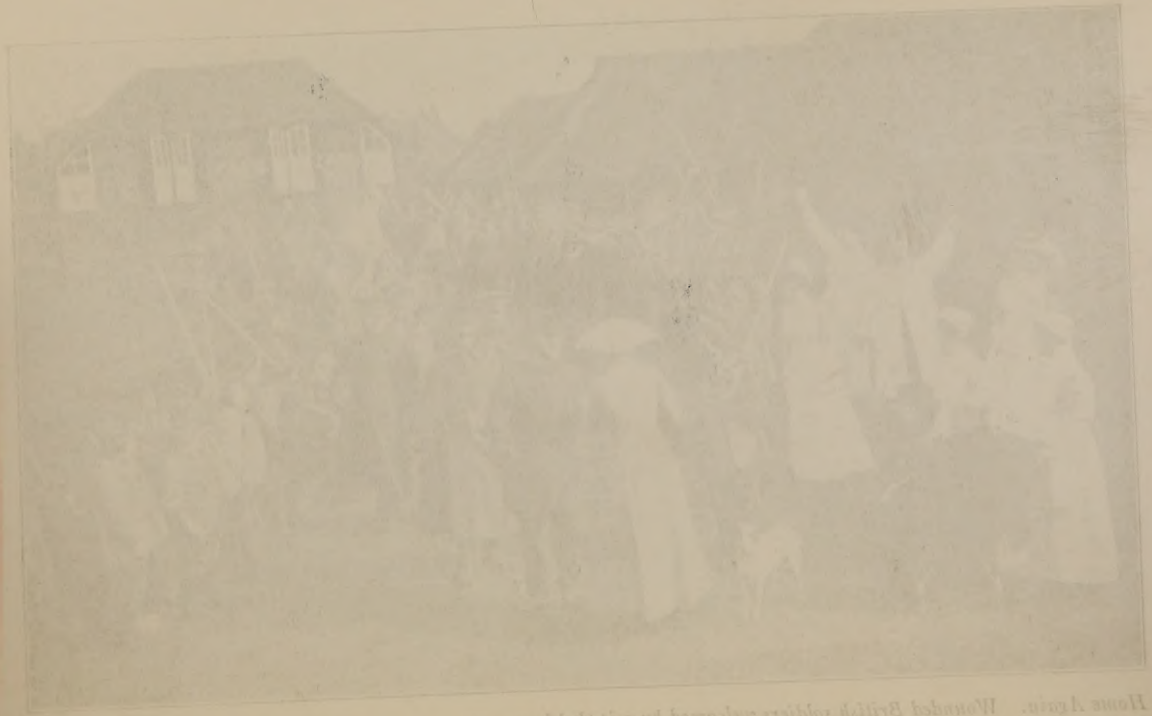
THE DISABLED SOLDIER



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Home Again. Wounded British soldiers welcomed by crippled boys at the Heritage Crafts School, Chailey, Sussex

THE DISABLED SOLDIER

BY

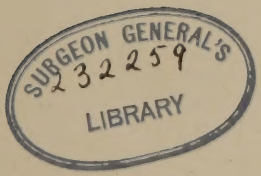
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WITH AN INTRODUCTION BY

JEREMIAH MILBANK

Vice-Chairman, Committee of Direction
Red Cross Institute for Crippled and Disabled Men



New York

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TO

THE AMERICAN SOLDIERS GONE OUT TO FRANCE

TO RISK PHYSICAL DISABILITY IN THE CAUSE

OF FREEDOM AND RIGHT

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INTRODUCTION

THERE has been evidenced in the past but scant public concern in the welfare of the disabled. It is probable that one reason for this has been the failure to advocate, in popular form, the logic of the arguments in favor of rehabilitation for self-support—arguments which have only to be made clear to meet with cordial and hearty acceptance. It is my hope that the present volume will go far to promote understanding of the real needs of disabled men, and enlist public interest in the cause of reconstruction.

When the preparation of this book was first proposed, I urged that the project be carried through. That I was asked to write the introduction is presumably because of my connection with the Red Cross Institute for Crippled and Disabled Men, which was established in the spring of 1917 as the first specialized trade school in the country for the handicapped adult.

One of the greatest problems to be met in the successful establishment of any new institution is the selection of a competent director. The Institute was peculiarly fortunate in securing for this position the services of a man so well qualified by experience and training as Douglas McMurtrie. For the past eight years he has devoted a large part of his time and effort to study of the obstacles and prejudices that confront the disabled man, and the means of overcoming them. This interest has culminated in the unselfish devotion of himself, his time,

his energy, and his enthusiasm to the many and complex activities of the institution which he so ably directs.

Under his leadership the Institute has already proved its value and assumed an important position in the field of rehabilitation and re-education. His reward, while not pecuniary, will be the everlasting gratitude of that great army of unfortunate individuals who have formerly been derelicts on the rough seas of misfortune, but to whom now has been given a greater opportunity to face the future with hope and courage.

JEREMIAH MILBANK

PREFACE

In any new science there are few books but a great multiplicity of pamphlets, periodical articles, and reports which baffle the reader who seeks to learn the state of knowledge on the subject. The rehabilitation of the disabled soldier is no exception to this rule and it has been necessary to go through hundreds of documents of an ephemeral nature to gain a clear idea of what principles have been developed and how these principles are actually being put into practice.

This volume aims to present for the general reader such a statement of theory and practice. In view of the extent of the field requiring to be covered, the treatment is necessarily elementary. But in view of the wide public interest in the future of the disabled soldier, and the manner in which the new reconstructive work of redeeming injured men from the social and economic scrap-heap has laid hold on the popular imagination, it is felt the book may meet a distinct need.

The book is entitled for the sake of brevity "The Disabled Soldier." It might more properly be named "The Disabled Soldier, Sailor, and Marine," for in all countries the same opportunities are extended to the members of all branches of the belligerent service. The word "soldier" in the text should always be read, therefore, with this qualification in mind.

The literary and scientific obligations of the author are extensive and almost too numerous to detail. It has not seemed feasible in a work of this kind to burden the text with footnotes and references, so an endeavor will be made to acknowledge the main sources of personal assistance and data. Most vital help has been freely given by members of the staff of the Red Cross Institute for Crippled and Disabled Men, among them Dr. J. C. Faries, Mr. Howard R. Heydon, Mr. Harry Birnbaum, Mrs. Donald Whiteside, Miss Florence Sullivan, Miss Gertrude Stein, Miss Ruth Underhill, Mr. Alexander Gourvich, Mr. Gustav Schulz, and Miss Letty L. Davis. Mr. Jeremiah Milbank, also of the Institute, and a distinguished benefactor in the cause of the cripple, has been so kind as to write the introduction. These staff colleagues have not only helped generously in many ways during the preparation of the manuscript, but have also read the proofs to check them for accuracy and to offer suggestions. Their part in the production is most cordially appreciated.

The individual chapters have been read by various authorities, to whom I am indebted for criticisms and suggestions and checking as to accuracy of statement—the chapter on "First Steps to Self-Support" by Lt.-Col. Casey A. Wood, M. C., U. S. A. and by Dr. Herbert J. Hall, of Marblehead, Mass.; "The New Schoolhouse" by Mr. W. E. Segsworth, Director of Vocational Training of the Invalided Soldiers' Commission of Canada, and by Dr. James C. Miller, now on the staff of the Federal Board for Vocational Education; the chapter entitled

"Hors de Combat" by Lt.-Col. David Silver, M. C., U. S. A.; "Out of the Darkness" by Lt.-Col. James Bordley, M. C., U. S. A., and director of the Red Cross Institute for the Blind, and by Mr. C. F. F. Campbell, of the same Institute; "In Wake of Battle's Din" by Lt.-Col. Charles W. Richardson, M. C., U. S. A.; "The Step in Time" by Dr. Henry Barton Jacobs and by Mr. William H. Baldwin, treasurer of the National Association for the Study and Prevention of Tuberculosis; "Brink of the Chasm" by Major George H. Kirby, M. C., U. S. A.; "For the U. S. Forces" by Mr. Curtis E. Lakeman, of the Department of Civilian Relief of the American Red Cross. I have further received much of value from the comments and correspondence of Miss Grace Harper and Captain H. W. Miller, both with the American Red Cross in France.

For the use of photographs illustrating the reconstruction of disabled American soldiers, I am indebted to the Instruction Laboratory of the Surgeon General, U. S. Army.

From the literature much data has been gleaned. Some of the principal authors to whom acknowledgment should be made are Eugène Brieux, Dr. Maurice Bourrillon, Léon de Paeuw, Gustave Hirschfeld, Prof. Ettore Levi, Sir John Collie, Major Robert Mitchell, John Galsworthy, Sir Arthur Pearson, A. G. Baker, Dr. Konrad Biesalski, Dr. J. R. Byers, Dr. J. Dundas Grant, Lt.-Col. E. N. Thornton.

The book has been set up in the printing department of the Red Cross Institute. The care taken by Miss

Inez Rodimon, Mr. William J. Howe, and Mr. Aage Petersen, of the staff of that department, in putting the manuscript into type has materially lessened the work of the author.

It may be noted in passing that the royalties on this volume have been assigned to the Red Cross Institute for Crippled and Disabled Men, as the director of which the writer has been privileged to serve in a volunteer capacity.

DOUGLAS C. MCMURTRIE

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New York

CHAPTER I

A RECORD OF INJUSTICE

BEYOND reaches of history, the disabled man has been a castaway of society. In the far east, the tribes of ancient India turned out their deformed members to wander in the wilderness and perish of exposure; here in America, among the Aztecs, deformed persons were sacrificed in time of famine and need, or on the death of kings and great men.

The disabled wolf is torn to pieces by the pack; primitive society abandoned, expelled, put to death its disabled and deformed members. Superstition was no doubt partly responsible for this savage practice, but it is conceivable that it was in great measure due to purely material considerations. In an age when life was a bare-handed struggle against starvation and death from man and beast, the tribe must have felt that its crippled members were useless if not dangerous burdens. They had to perish in the ruthless struggle for existence.

In the course of time, primitive man came to anticipate the operation of the natural law of selection by putting the deformed to death as soon as they were born.

Yet, with the dawn of civilization and the development of pastoral and agricultural life, the condition of the cripple did not improve to the extent that might have been expected. Oriental peoples turned forth their cripples to wander in the wilderness, the inhabitants of India cast them into the Ganges, the Spartans hurled them from a precipice, the Hebrews banished them so

that their cripples had perforce to beg by the roadsides. The exposure of deformed and "superfluous" infants remained a widespread and long-lived practice. Among some peoples the motives underlying these customs were intentionally eugenic, in a primitive way; in general, however, they seem to have been partly economic and partly superstitious. With regard to the latter, the superstitious motives, it is a curious fact that whereas primitive peoples have frequently found something sacred—a touch of the divine—in persons afflicted with disorders of the mind, bodily deformity seems to have been quite generally regarded as a blight sent by the gods, a punishment for sin, evidence of traffic with devils.

This belief that the physically deformed are spiritually unfit has left its trace in the Hebrew scripture. Moses decreed that a man blind, lame, brokenfooted, brokenhanded, "crooktbackt," or dwarfed should not make offering to the Lord lest the sanctuary be profaned. The Greeks, worshipping perfection in bodily form, looked upon the cripple as the incarnation of everything unlovely, not only physically but mentally and morally as well. Thersites is described by Homer as possessed of every ugly attribute, deformed equally in body and mind.

The history of the social attitude toward the cripple is bound up with the history of the development of charity. The literature of antiquity is rife with references to beggars and beggary; to give alms was held to be a kind of obligation, more or less automatically performed. With its performance, all social obligation was fulfilled. As a result of this attitude, kindly references to the cripple are rare in ancient literature. Job

recites as one of his benevolences that he was eyes to the blind and feet to the lame. In one of the sacred books of the East it is stated that the inheritance share of a son crippled in both feet or maimed in both hands should be twice the share of one who is sound.

The most highly developed civilization of antiquity, that of Athens, provided a system of relief for those of its citizens who were unable to earn a livelihood on account of bodily defects and infirmities. The qualification was a property test: it had to be proven that the applicant had no property in excess of three *minae* (about $100 in present purchase values). The senate examined the case, the ecclesia awarded the bounty, which was one or two *obols* a day—enough for a bare sustenance.

The advent of Christianity struck a new note in the attitude toward the crippled and the deformed. Even in Isaiah's prophecy of the coming of the Messianic kingdom, he foretells that "then shall the lame man leap as a hart." Christ, referring to his ministry, says: "The blind receive their sight, and the lame walk." It is also related that the blind and the lame "came to Him in the temple and He healed them."

Many cures of cripples are attributed to the Apostles. "A certain man lame from his mother's womb" was healed by Peter. It is related that "immediately his feet and ankle bones received strength." During the ministry of Philip "many taken with palsies and that were lame, were healed." During the mission of the Apostle Paul to Lycaonia, he healed a cripple described as follows: "And there sat a certain man at Lystra, impotent in his feet, being a cripple from his mother's womb, who had never walked."

For all that it represented a distinct step forward, the new influence was not profound. The Christian Councils did their best to combat the ancient custom of exposing or abandoning deformed infants; but, despite their efforts and the laws of the Christian Emperors—Constantine, Valentinian, Justinian—the custom survived. Gradually, by way of humanizing this practice, the institution known as the "turning slide" became a feature of church doors; the deformed foundlings thus received were taken care of in crèches, hospitals, asylums, refuges for the blind, the deaf, the crippled, the defective. In 590 A. D., St. Gregory reformed the administration of the church and of charity in the city of Rome in an elaborate manner; one of his provisions was that the sick and the infirm were to be superintended by persons appointed to inspect every street. But the recognized mode of providing for the disabled remained in general what it had been in antiquity—almsgiving in response to begging. In Constantinople pauperism became so extreme during the fourth century that the Emperor Constantine decreed that all *able-bodied* beggars were to be condemned to slavery; the inference that beggary was to be reserved for the disabled is quite apparent. In Queen Elizabeth's day, more than a thousand years later, we meet the phrase "sturdy beggars" with a similar implication. Between these dates we have Charlemagne's order that no one was to presume to give relief to able-bodied beggars unless they were set to work.

In all justice to the Middle Ages it must be pointed out, however, that casual almsgiving was not the sole relief provided. The church was actively engaged in relief work, at first on a parochial basis, then on an institutional. Side by side with the centers established in the

monasteries, there grew up a system of endowed charities, also under church rule, for the care of the "poor" and the "sick" and others in need of aid; it is fair to assume that the crippled and the deformed were included in these categories, although specific mention of them rarely occurs. Thus, along with other hospitals established at Canterbury in England during the twelfth century, there was one for "poor, infirm, lame and blind old men and women." That all these institutions provided relief of the most primitive kind only need not be emphasized.

Before pursuing further the gradual evolution of the relief afforded the crippled and the deformed, it will pay to consider the use which ancient and medieval society made of these unfortunates.

As it developed in luxury and culture, antiquity found a characteristic employment for some types of the deformed, especially for the dwarfed and the grotesquely shaped. There are extant ancient Greek representations of comic figures of this sort—forerunners, possibly, of the medieval court fool. Attic comedy made constant use of actors padded to simulate various types of deformity. The tradition that has come down to us with regard to Æsop presents the author of the fables as born to slavery and deformity; and although modern historians seem to be doubtful as to whether Æsop ever existed or not, it is significant that tradition has created such a personality and that the oldest writer to mention his person speaks of his appearance and his voice as contributing as much as his stories to the amusement of his company.

But this comic exploitation of deformity, brutal as it must seem to us, is the brighter side of the picture.

Seneca has left an appalling record of how some Roman masters exploited deformed slave children as beggars. If, as they grew older, their deformities were not conspicuous enough to excite compassion, the poor creatures were intentionally crippled to an even greater extent: their arms were cut off, their shoulders twisted so that they became humpbacked. If the day's earnings were not sufficient, the master rebuked the wretches, saying: "You have brought in too little, bring hither the whip; you can weep and lament now. Had you appealed thus to the passer-by, you could have had more alms and you could have given me more."

The Middle Ages, like antiquity, exploited the appeal that physical deformity makes to a primitive sense of the comic. The court fool or jester was to be found almost universally in the retinues of princes and often in the households of noblemen. The type literature has seized upon and immortalized was characterized less by physical deformity than by a certain superficial quickness of wit and power of repartee; by far the greater number, however, consisted merely of creatures who by reason of deformity of mind or body were calculated to excite heartless laughter or ridicule. The institution was firmly entrenched for many years, despite many tendencies operating to improve the situation. Even a number of decrees passed by the Reichstag in the sixteenth century failed to obviate the practice. Not until the Enlightenment was the final stage reached and the custom abolished.

Even after this time, the court fool was still in vogue in the Russian court, Peter the Great having so many jesters of this type that it was necessary to divide them into classes. When the Spaniards under Fernando

Cortez accomplished the conquest of Mexico, court fools and deformed human creatures of all kinds were found at the court of Montezuma.

Seneca's picture of the inconceivable brutality of some Roman masters has its medieval pendant in the picture drawn by Sebastian Brant in his "Narrenschiff." This German satire was done into English by Alexander Barclay in 1509, under the title of "The Ship of Fools." The following is a slightly modernized quotation from Barclay's version:

> Some other beggers falsly for the nones
> Disfigure their children, God wot, unhappily,
> Mangling their faces, and breking their bones
> To stir the people to pity that passe by.
> There stande they begging with tedious shout and cry,
> Their own bodies turning to a strange fashion
> To move such as passe to pity and compassion.

Heartless ridicule, inhuman exploitation, and, with it all, "pity and compassion." Add to this the superstitions —the belief in "changelings," in the "evil eye," in satanic paternity, which the medieval mind generally advanced by way of "explaining" deformity—and the strange picture is complete.

If space permitted, it would be instructive at this point to consider in detail the rôle the cripple has played in literature. Allusion has already been made to Thersites, who serves Homer not only as a foil to the heroic splendor of Achilles and Ulysses, but also as a maker of trouble and sower of discord. In the Siegfried saga, the dwarf Mime plays a similar part. And in Shakespeare's Richard III we have a classic presentation of the cripple

as "villain." In the opening monologue of the play, Shakespeare gives us a glimpse of the psychology of the cripple as he conceived it:

> But I, that am not shap'd for sportive tricks,
> Nor made to court an amorous looking-glass;
> I that am rudely stamp'd, and want love's majesty
> To strut before an ambling wanton nymph;
> I that am curtail'd of this fair proportion,
> Cheated of feature by dissembling nature,
> Deform'd, unfinish'd, sent before my time
> Into this breathing world, scarce half made up,
> And that so lamely and unfashionable
> That dogs bark at me as I halt by them;
> Why, I, in this weak piping time of peace,
> Have no delight to pass away the time
> Unless to see my shadow in the sun
> And descant on mine own deformity,
> And therefore, since I cannot prove a lover
> To entertain these fair well-spoken days,
> I am determinèd to prove a villain
> And hate the idle pleasures of these days.
> Plots have I laid, inductions dangerous,
> By drunken prophecies, libels, and dreams,
> To set my brother Clarence and the King
> In deadly hate the one against the other;
> And if King Edward be as true and just
> As I am subtle, false, and dangerous,
> This day, etc.

Shakespeare's learned and philosophic contemporary, Lord Bacon, in his "Essay on Deformity" strikes a similar note, holding that "deformed persons are commonly even with Nature; for as Nature hath done ill by them, so do they by Nature, being for the most part . . . void of natural affection."

Writing almost two centuries after Shakespeare, Schiller, in his earliest play, "The Robbers," presents an interesting parallel to Shakespeare's Richard III in the figure of Franz Moor, who says:

> I have potent reasons to be out with Nature, and on my honor I shall press them all . . . Why did she burden me with this load of ugliness? Why me, of all people? . . . Verily, I believe she threw into a single heap all the despicable elements of mankind, and baked me therefrom. Death and devils! Who gave her the authority to dower others with this and that, and to withhold these things from me?

Later he cries out, pathetically enough, as if with a laugh of grim irony:

> But is it just to damn a man because of his deformity? In the most wretched of cripples there may shine a great and lovable soul, like a ruby buried in mud.

In conformity with medieval tradition, Goethe in "Faust" provides Mephisto with a limp. Stevenson's genial cutthroats in "Treasure Island" are variously mutilated; and even one of our own present-day novelists has a penchant for legless and one-eyed villains!

But, from the end of the eighteenth century down, literature has grown increasingly rich in imaginative works that are not obsessed with this idea of a relation between physical and moral deformity. From Quasimodo to Little Eyolf, from Tiny Tim to Richard Calmady, the cripple has been presented with a freshness of vision and a realistic insight that mark the dawn of a new era for this social castaway. Perhaps the change cannot be more strikingly indicated than in the following translation from "an old manuscript" first published in 1806; in its lonesomeness, its resignation, its poignant imagery, the little poem is a most revealing bit of the

true psychology of the cripple under adverse social conditions:

Dear hand of God!
Lighten my heart,
Help me to find
Fun in my smart.
Methinks the dear Lord
At toss-ball doth play,
The harder he strikes me,
The higher my way.

Or I am a sapling
A garden within,
God is the gard'ner
And bends me to Him,
He cuts me and prunes me
And bends every limb,
So I may grow upward
And nearer to Him.

Oh, let me proclaim it,
God cuts to the bone,
He chips me and hews me,
But I make no moan,
You marvel and wonder?
I think it His wish
To sculpture an angel
Out of my flesh.

The dawn of a new era! It is probably fair to say that the old era was summed up and the new era prepared for by a Spaniard named Vives who published a book early in the sixteenth century on the subject of the management of the poor—a book which was translated into several languages and widely read. Vives divided the poor into three classes: those in hospitals and poor-houses, public homeless beggars, the poor at home. He proposed a census of the poor in each

town and the collecting of data as to the causes of distress. Then he planned the establishment of a central organization of relief under the magistrates. Beggary was to be strictly prohibited; work was to be provided for all. The non-settled poor who were able-bodied were to be returned to their native homes; the able-bodied settled poor who knew no craft were to be put on some public work—the undeserving being set to hand labor; for the others, work was to be found, or they were to be assisted to become self-supporting. Hospitals were to be classified to meet the needs of the sick, the blind, the insane. Funds were to be obtained chiefly from private sources and from the church.

The Sorbonne approved this scheme; the city of Ypres put it into effect in 1524; similar plans were adopted in Paris and elsewhere. Queen Elizabeth's Poor Relief Act of 1601 was largely based on it. It was an ambitious scheme for the administrative technique of the age; but, whatever its success, it had in it the seed of a rational approach to the problem of the poor in general and of the disabled and the deformed in particular.

Influenced, it may well be, by this Spanish book, President de Pomponne de Bélièvre founded in France in 1657 an asylum in which the infirm could find suitable work. Despite several sporadic imitations of this project, which later became the Salpêtrière, the early measures did not in a strict sense mark the beginnings of care for cripples, but they operated to the ultimate advantage of those who, by reason of their infirmity, were cast upon the pity of their fellow men. The actuating motive of provision in many cases, however, was utilitarian in character. One object—an object avowed by Vives, for

instance—was that all cripples might be so confined that they should not annoy the community by their deformed appearance, and the streets and highways be rid of beggars.

Some of the many monasteries which had not been utilized since the time of the Reformation were thrown open and converted into orphan asylums, mad-houses, or penitentiaries. In the establishment of the various institutions the cripple was frequently considered. For instance, those handicapped by deformity were provided for at a hospital for wretched and pauper invalids established at Pforgheim in 1722 by Count Luitgard of Baden. This was later transformed by Count Charles Frederic of Baden into an orphan asylum, making especial provision, however, for young and old cripples. According to the official ordinance creating this institution, the third class of inmates was to be composed of "those who have such physical defects that they are an especial abomination and disgust to other men whenever they come into their sight." The cripple department was, however, abolished in 1808, probably because the quarters were needed for the insane.

Such provision for cripples, however, gave them asylum only and did nothing to better their condition. The rise of the science of orthopedics was responsible for the ensuing improvement. The theories of the various orthopedists were best put into practice in an institution, and a large number of these were founded in the first decades of the nineteenth century; as, for example, those located at Paris, London, Leipzig, Lübeck, Berlin, Vienna, and Stockholm.

The first institution in the world with an all-around program for ameliorating the lot of the cripple was

established in Munich in 1832, but this was devoted particularly to the care of crippled children. A long period followed before the creation of the second establishment of the same sort which came into being in Copenhagen in 1872. From this time on, the number of schools for crippled children rapidly increased.

But for the care of the disabled adult there was no provision at all.

In the foregoing sketch of the history of the social attitude toward the crippled and disabled individual, no mention has been made of the care of the war cripple, the disabled soldier. The subject deserves a section to itself, despite the fact that in its broad outlines it parallels the tragic history of the care of the cripple in general.

Historians have done very little to lift the veil that covers the fate of the disabled soldier of ancient times. In view of the limitations of primitive medical and surgical science, and of the custom of dispatching the enemy wounded after the field had been won, there is every reason to believe that it is a bloody veil. It is recorded, however, that ancient Athens fed its disabled soldiers at the state's expense, and that Rome under Augustus paid for the keep of its disabled legionaries out of public funds. Veteran legionaries were often provided for by grants of settlements on the frontiers of the empire.

During the Middle Ages, when warfare was on a feudal basis, only those sufficiently well-off to equip themselves took part in military enterprises; they were relatively few in number and usually able to care for themselves in the event of permanent disability. At the time of the Crusades, Philip Augustus of France entertained the project of a hospice for disabled soldiers. The Pope congratulated him on his plan, and endowed the

institution in advance with certain privileges. St. Louis of France, returned from the Crusades with his shattered hosts, did actually establish an asylum for some 300 soldiers blinded by "the Asiatic sun." In most cases, however, the disabled soldier was thrown upon private charity for support. This duty devolved upon the lord who had brought his vassals to the king, and upon the monasteries.

With the crumbling of the feudal system, and the development of standing armies during the fifteenth century, the professional soldier came into being. And from that time on, the disabled soldier was a recognized type.

How was he provided for? For a time shift was made with the dispensation of private charity, monastic and otherwise. Supplied with the proper credentials, the disabled soldier would present himself at a monastery, and, after promising to obey the rules and to wear the garb of the institution, he would be admitted as a lay-monk. Few, however, found the life endurable. A French writer of the sixteenth century described the conditions in these terms: "Once the poor soldier is received [into the abbey], he may not abide a fortnight before most of the monks, deriding his hardships, his perils, his wounds . . . do put so many obstacles in his path that he is fain to compound for a pension of fifty or sixty *livres* and betake himself elsewhere." Departing, the soldier would sell his annuity for a trifle, which he would spend on drink, speedily lapsing into the ranks of beggars and cutthroats with which the countryside was infested.

In England, with the expropriation of the monasteries, the disabled soldiers were thrown wholly upon the charity

of their leaders. In Queen Elizabeth's time, the captains of forces in Flanders complained that they were expected to make provision for the sick and wounded "whose charge lay heavily on them." The Queen was "troubled whenever she took the air by these miserable creatures." Toward the end of her reign, steps were taken to provide for "maimed, hurt, or grievously sick soldiers," but little good was accomplished.

From this point on, in the interests of clearness, it will be advisable to trace the history of the care of the disabled soldier in France, first, and then to return to England, and then to review the provident measures as they were developed in America. Italy and Germany, politically disorganized in great measure down to the latter half of the nineteenth century, have little to offer that is interesting until we come to very recent times.

In France, then, toward the end of the sixteenth century, after the close of the civil wars, the problem finally became acute. A multitude of crippled and broken soldiers appealed to the victor, Henry IV, for the "means to live at ease the rest of their lives." They were all ruined men, they said, because either they had several times endured capture by the enemy and had been obliged to ransom themselves, or else they had been wounded and had expended their worldly goods for medical treatment. "They had been reduced to beggary, a shameful thing for the military order." The king was touched; and after considering various expedients, hit upon the idea of providing a hospice for the war disabled.

To this end, he took over an asylum that had been established for orphans who were to become apothecaries, changed its name to the *Maison Royale de la*

Charité chrétienne, and decreed that the institution was to be supported by all the excess revenues that could be found in the budgets of the charitable institutions —chiefly monastic—in France. To gain admittance, the wounded soldier had to present a certificate from his captain or colonel stating how long he had served, the "combats, perils, and hazards he had been exposed to," his "valor," and in what "military actions" he had been wounded.

Unfortunately, however, the commissioners of the institution were unable to collect a single *livre* from the administrators of the charitable institutions in France. Their budgets, so the administrators declared, contained no surpluses! In a few years the institution was practically defunct. In 1611, Louis XIII, successor to Henry IV, closed the doors of the *Maison* and returned it to the embryonic apothecaries. The disabled inmates who had survived were pensioned, and very liberally.

But only for a little while. The need for state funds soon operated to reduce the annuities. The pensioners complained. "We receive," said they, "a mere alms, both odious and repugnant to the deserts of our quality, for the most part gentlemen, captains, and men full of honors and courage." The pension system was revised. Again the monasteries were drawn upon for funds. Each monastery was to support its quota of disabled soldiers. But the pension was inadequate, the red tape and trouble involved in collecting it was interminable. Before long most of the soldiers had sold their pension rights, and again the countryside was terrorized by wandering beggars, thieves, and cutthroats.

Convinced of the defects of the system, Louis XIII abandoned it, and took up the institutional idea his

father before him had essayed. He planned generously, and undertook construction in 1633. This new venture was destined to be the prototype of the famous *Hôtel des Invalides*, the idea of which is usually attributed to Louis XIV.

Very little is known of the history of the institution thus established by Louis XIII. In 1646, an official report declared that the building lodged only a gatekeeper, a pot-house, and the architect who had designed the structure; nowhere was there a soldier to be found. Doors and windows gaped, the roof leaked. In 1656, the building was given to the general hospital of the Salpêtrière, which used it for the aged poor, as a madhouse, and as a prison.

Louis XIV returned to the pension system, combining with it the plan of appointing the less severely disabled to garrison duty in the frontier towns. But there these unfortunates were so badly off that they declared "they had rather beg than submit to the posts that had been assigned them." The old abuses and disorders reappeared. In order to curb them, the king ordered that all disabled soldiers caught begging in the city of Paris were to be hanged; whoever gave them alms was to be fined 100 *livres*. All to no purpose. The situation became critical; to solve it, Louis XIV revived the institutional idea.

The establishment, like everything else undertaken by Louis XIV, was on a magnificent scale. It was to house 4,000 pensioners. The king resorted to the monasteries for funds, but the yield was inadequate. In 1682 he decreed that on every *livre* that was spent for military purposes a tax of two *deniers*, later raised to three, was to be contributed to the support of the soldiers' home.

During the war of the Spanish Succession, this sum amounted to 1,250,000 *livres* a year. The future of the institution was secure.

All in all, measured by the ideals of its time, this latest venture was a great success. In the fourteen years between 1676 and 1690, over 5,000 soldiers applied for admission; during the next fourteen years, over 10,000.

A brief description of the *Hôtel des Invalides*, as the institution was called, is desirable, for there can be little doubt that it served as the inspiration, if not the model, for the soldiers' homes that were later established in most civilized countries.

The superannuated and the infirm constituted the majority of the population of the *Hôtel*. On the eve of the Revolution, over a century after its establishment, out of 3,000 inmates, 1,107 were old men between seventy and ninety-two years of age, 1,488 had suffered amputations or were otherwise wounded, decrepit, or infirm, of whom 72 were provided with wooden legs, 62 were one-handed, 4 minus both arms, 203 blind, 2 with silver noses, 129 on crutches, 185 helpless, and 68 idiots.

The house was organized first and foremost for the care of the aged and the sick. More than half the personnel spent all their days in the infirmary, looked after by sisters of charity. A comrade was assigned to each man who was helpless enough to need constant assistance, the former receiving a special allowance for his pains.

The officers ate apart in special dining-rooms; the privates ate in two "shifts" in four great refectories. Food was good and plentiful, including daily portions of meat, bread, and wine. The institution provided uniforms and shoes, and a pittance of fifteen *sous* a month.

The discipline was military; the *Hôtel* was like a garrison. There were special police, gate-keepers, sentinels. Everything was done to the roll of drums. Severe military rule was supplemented by a moral discipline, which provided for compulsory attendance at Sunday services, and heavy penalties for infractions of the rules against swearing, intoxication, fisticuffs.

Amusements were rather limited, except for card-games and skittles. Some of the inmates worked little gardens. They were all permitted to work in their rooms. The administration even went so far as to provide tools and—for those who cared to learn—instruction in a trade. Those who were married, and whose families lived in the neighborhood, were given frequent permission to visit their wives and children; but no one could marry without the consent of the governor.

Certain marks of honor raised the institution above the level of a mere asylum; but personal liberty was greatly reduced, and many were glad to leave after a short stay.

The king was not slow to notice that many of the disabled soldiers could, at a pinch, still render service, notably on garrison duty in frontier strongholds. The *Hôtel* continued to clothe and feed those who were selected for this service, and gave them pay or half-pay. In 1736 there were 141 of these "detached companies." Those who found life in the *Invalides* too dull asked nothing better than to be assigned to this service.

Gradually the custom grew up of granting three years' leave to those who had families and longed to live with them, during which time the *Hôtel* clothed them and gave them an allowance of at least 100 *livres*. Soon the three years' leave was extended indefinitely, the allow-

ances automatically becoming pensions. In 1790, in addition to 2,370 disabled men in the institution itself, there were throughout France 26,000 pensioned soldiers.

Thus, the two principles of institutionalism and pensions—principles ultimately adopted by all the western nations—came to exist side by side in France, continuing down through the nineteenth and into the twentieth centuries. In 1831 the pension system was revised and regulated. The revised law based the pension awards on years of service, on rank attained, and to some slight extent on the seriousness of the disability. This law was still operative when the war of 1914 began.

Today, the *Invalides* is little more than a magnificent war museum. It did not escape severe criticism even in its palmiest days. Voltaire regarded it as constituting in large measure a source of waste, holding that "the discharged soldier might still labor and follow a trade, and give children to his country." Another French writer, Ardant du Pic, declared: "The *Invalides* is superb as a bit of apparatus, of ostentation. I wish that the original inspiration had been an impulse of justice, a Christian idea, and not purely one of military policy; nevertheless, the effects are morally disastrous. This assembly of idlers is a school of depravity in which the invalided soldier ultimately forfeits the right to be respected."

The history of the care of the disabled soldier in France is largely typical of the history of this movement in other countries. In most nations, the administrative conscience awoke but tardily to an even approximately adequate sense of its obligations both to society and to the individual disabled in the most perilous of social functions. It will be remembered that in England,

toward the close of the sixteenth century, Queen Elizabeth took ineffective measures for the relief of hundreds of soldiers who had been invalided home from Flanders. There seems to be no record of further public action until the time of the Commonwealth, when Parliament made more effective provision, both in the form of pension grants and of soldiers' hospitals and homes, but only for those soldiers who had been disabled fighting for Cromwell. Crippled royalists received no consideration. When these partisan provisions were revoked by Charles II on his accession to the throne, the hitherto neglected royalist soldiers took advantage of the opportunity to plead for provision. And in 1662 the king approved a measure enabling discharged soldiers to practise a trade without completing an apprenticeship—a measure which provided but sorry relief for those most in need of care, the severely disabled.

In 1682, however, the king, prompted by the need of maintaining a considerable force and inspired, doubtless, by the magnificent example of Louis XIV of France, issued a decree for the establishment of the Royal Hospital at Chelsea for disabled soldiers. About the same time steps were also taken for the establishment of the Greenwich Hospital for invalided seamen. Both institutions were carried to completion under William and Mary.

Chelsea Hospital was supported chiefly by money compulsorily deducted from the soldiers' pay. Not until the nineteenth century did Parliament provide more generously for the maintenance of the institution. In addition to the relief provided by these hospitals, a pension system was inaugurated shortly after the opening of both establishments, based on disability incurred during service or on infirmity after twenty years' service.

Before long the numbers qualifying on this basis had increased so extensively that it was necessary to establish a system of "out-pensioners," organized into "invalid companies" and liable to special service in time of war.

The pension system was subject to great abuses, the pensioners generally receiving but a fraction of the income (small enough in itself) they were legally entitled to. In 1754 William Pitt reformed the system, "having it much at heart to redeem these helpless unthinking creatures from their harpies."

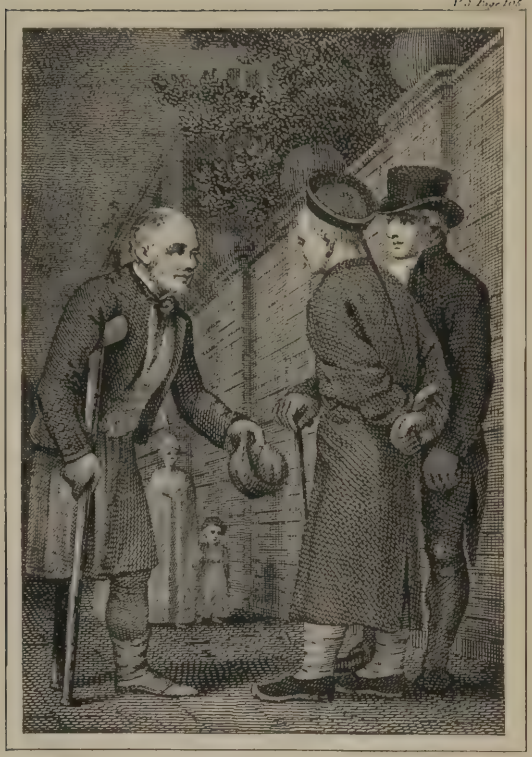
Oliver Goldsmith, in one of his essays, quotes a disabled sailor who had been driven to begging at the outskirts of a town as saying to him: "As for my misfortunes, master, except for the loss of my limb, and my being obliged to beg, I don't know any reason, thank Heaven, that I have to complain. Blessed be God, I enjoy good health, and will forever love liberty and Old England. Liberty, property, and Old England, Huzza!"

Early in the nineteenth century, Parliament passed an act granting pensions to all soldiers who were invalided, disabled, or discharged after from fourteen to twenty-one years of service. Since then, and especially after the South African War, the system has been generously extended, including relief not only for disabled and retired soldiers, but also for the widows and orphans of those dying in service.

It is pleasant to be able to say that no nation has hitherto been so generous in its provision for the disabled soldier as the United States of America. In fact, the first relief measures were undertaken very shortly after the founding of the early colonies. Plymouth Colony was founded in 1620; it passed its first pension legislation in 1636, providing that any man who should be sent



A Procession of Cripples, by Jerome Bosch, a fifteenth century painter who had a predilection for taking cripples as his subjects



The Disabled Sailor Approaches Oliver Goldsmith.
A Reproduction from a plate in an 1809
edition of Goldsmith's works

forth as a soldier and return maimed was to be maintained competently the rest of his life. Eight years later, the Virginia Assembly passed a disability pension law, and not long thereafter another law creating a system of relief for the needy dependents of any colonist killed in the service of the colony.

Long before the Revolution, other colonies had taken similar measures, Rhode Island not only providing pensions for the disabled and for the dependents of those killed in service, but also decreeing that every wounded soldier was entitled to medical care at the colony's expense until cured.

A few months after the beginning of the Revolution the Continental Congress declared that half-pay would be allowed every officer, soldier, and sailor incapacitated during the war. However, since the Continental Congress possessed neither funds nor any real powers, the pension obligations incurred by this and by similar resolutions rested solely upon the several states, some of which repudiated them.

Several times during the bitter struggle, at critical moments when the outlook was gloomiest and the army discouraged, General Washington appealed to the Congress for more generous pension provisions. The opposition to these proposals was always strong. A provision granting officers somewhat more favorable schedules than those set up for the men was violently denounced as undemocratic.

The first general pension law enacted under the Constitution was passed in 1792 and amended the following year. In its amended form it provided that five dollars monthly (raised to eight dollars twenty-three years later) was to be paid all privates and non-commissioned officers

disabled in the service of the Continental Army. Incapacitated officers were allowed half-pay.

This measure furnished the model for the regular army pensions law that was passed in 1802 and which continued unaltered in its essentials down to the Civil War. At various times throughout the first half of the nineteenth century special pension legislation for special groups, such as the widows of the Revolutionary soldiers, was enacted, the details of which need not be here discussed. During the Civil War the principle of fixed rates for specific disabilities—the loss of a hand, the loss of a foot, both hands, both feet, both eyes, etc.—was introduced, a principle which has since found fruitful application not only in military but also in industrial legislation. In 1870 it was enacted that artificial limbs, renewable every five years at public cost, be provided.

In general, the tendency since the Civil War has been in the direction of unusual liberality. There is no need here for recording this legislation in detail. It is sufficiently well known to everybody that in some directions the system has been extravagantly extended, so that, in the words of an American general, "It has come to pass that those who were merely on the rolls for a few days, and the malingerers and the deserters all march as veterans of the great conflict."

One other feature deserves mention, however. This feature is the state and federal Soldiers' Homes. The former number in excess of thirty, all told; in some of them the wives, mothers, widows, sisters, or daughters of the beneficiaries are maintained, as well as the disabled and invalided soldiers themselves. The total number of individuals maintained in these state institutions is about 11,000. The federal institutions are two in num-

ber, both situated in the District of Columbia. One of these, the National Home for Volunteer Soldiers, has ten branches in various parts of the country. The number cared for in the federal homes has varied between 18,000 and 30,000.

The lot of the industrial worker who is disabled by accident has in the past been very unfortunate. Up to a few years ago he had no redress except through the courts and the employer had many technical defenses which could be offered. For the most part the injured man slipped back in the social scale and frequently became dependent on relatives, or friends, or on public charity.

Even after the recent advent of compensation legislation which has done much to remedy the injustices involved in industrial accidents, the situation has not been greatly improved because while the money compensation went to support the man during the period of idleness ensuing the accident, it did nothing constructive to put him back on his feet again and to restore him to useful employment. Too often the man has lived on his compensation as long as it lasted and when it expired been forced to appeal for charitable assistance. Amputations and other injuries are great economic levelers, and it has been found in several studies that the skilled worker before the accident has been reduced after it to employment as peddler, messenger, or watchman. In this process a vast deal of potential ability and productiveness has been lost to the community.

This statement gains force when it is considered that in eighteen states alone there are being injured in industry over 750,000 men per year. Over 35,000 of these accidents represent permanent disability either partial or

total. It is estimated by competent authority that the permanent disabilities produced annually through industrial accident in all the states number over 80,000 of which over 2,000 represent total disability and over 28,000 amputation cases.

Up to modern times, therefore, the cripple has been always an object of charity if not of actual neglect and mistreatment. Public opinion has conceived the cripple as helpless and almost insisted that he become so. Charity has been readily proffered, but almost never the opportunity to make good and get back on his own feet. Educational advantages have been closed to the disabled man; the employer has refused him a job.

Successful cripples are unanimous in evidence to the effect that the greatest handicap is not a loss of limb or other disability but the weight of public opinion. They have had to fight constantly against it in order to make their way and assume a useful place in the work of the world.

Even the social workers who have a natural interest in all the unfortunate classes have been forced practically to give up the crippled man. There have been sporadic attempts in various large cities to operate employment bureaus for the physically handicapped, but in almost every instance the work was given up because it was impossible to get employers to take men and because for disabled men who needed training prior to placement there was no possibility of obtaining the requisite educational opportunity.

For decades every indication has pointed to the need of special training facilities for the disabled. But the community did not see fit to provide them.

CHAPTER II

BREAKS IN THE WALL

About the first move of a constructive character looking toward putting disabled men back on their feet must be credited to Belgium. In 1908 there was founded at Charleroi in the Province of Hainaut a school and shop for men crippled in industrial accidents. It was pointed out by a public spirited lawyer, Paul Pastur, that it was better to train the disabled for work which they could perform than to be content with paying them compensation and permitting them to remain in idleness. The subjects taught to the adult pupils in this Belgian school were bookbinding, shoe repairing, tailoring, saddlery, harness-making, and clerical work. There were likewise shops for the seriously disabled and older men for the making of grass carpet and baskets.

Beginning one month after admission to the classes or shops the workers were paid a small stipend, and if they persevered and remained over six months they received pay for the first month as well.

This pioneer experiment proved successful and the institution flourished.

In 1897 there was established in Petrograd, in connection with the Maximilian Hospital, a shop for the manufacture of orthopedic apparatus and for the training of cripples in this trade. Later other equipment was acquired, and in 1901 residential facilities were established. Training has been given in the making of orthopedic appliances, rug-making, shoemaking, cabinet-

making, turning, brush-making, willow work, weaving and needlework, saddlery, and tailoring. Cripples between the ages of fourteen and thirty are received for instruction, and the average course of training is four years in length. During the Russo-Japanese War the workshop was considerably enlarged.

After the South African War there were established in Great Britain by the Incorporated Soldiers and Sailors' Help Society workshops for the employment of disabled soldiers.

There were established in France in 1899 by M. Marsoulan, under the auspices of the Department of the Seine, subsidized workshops for cripples and incurables of both sexes. The occupations carried on are the making of grass carpet, chair-caning, toy-making, and the like. These shops are more in the nature of relief agencies than training schools.

A school similar in character to the one at Charleroi was organized by the Belgian province of Brabant just prior to the outbreak of the present war. Its plans were completely drawn and its equipment acquired, when the German invasion interrupted the enterprise.

The advent of a new era for the disabled man, however, was marked by the establishment in Lyons, France, in December 1914 by Édouard Herriot, mayor of the city, of the first training school for invalided soldiers. M. Herriot found it difficult to reconcile the number of disabled men, strong and well with the exception of their specific handicap, who were sunning themselves in the streets and public squares in the city, with the desperate need for labor in the local munition factories. His first impulse was to find jobs for these men, but he soon learned that the men who were unemployed were

those so handicapped as to be disqualified from returning to their former occupation. Before they could be restored to employment they must needs be trained in some trade compatible with their handicap.

But a few months after the declaration of war—to be specific on November 30, 1914—Mayor Herriot asked consent from the municipal council of Lyons to establish a training school for the *mutilés de la guerre*. On December 16, a little over two weeks later, the school opened its doors and in the picturesque statement of French origin, "The Mayor welcomed the first three pupils, grasping them by their three hands." The school was housed in an eighteenth century building which belonged to the city. The pupils registered in ever increasing numbers and so great was the need that before long the old building in the Rue Rachais was outgrown. An annex to the school was therefore established on a farm property at the outskirts of the city. Soon after its foundation, the original school was christened the École Joffre and the new branch was designated as the École de Tourvielle. Both schools soon outgrew their accommodations. By October of the first year of operation, it was necessary to turn applicants away. There was faced either the necessity of further enlarging the plant or saying to the men injured in the recent combats in Artois and Flanders: "We are sorry but you were wounded too late." The authorities at Lyons decided that they would not submit this excuse and at once decided to build new pavilions and open new courses.

The schools are open to soldiers whose disability is such as to entitle them to pension. Men from any part of France, from the colonies, and from the allied nations are accepted as pupils, but preference is given

to those residing in the vicinity of Lyons or in the invaded sections of France.

The length of course ranges from six to eighteen months. Instruction, board, lodging, and clothing are furnished without charge and no deduction is made from any pension which may have been awarded. Pupils not receiving pensions or allowances are paid by the school twenty cents a day for pocket money. The proceeds from the sale of work produced by the shops is discounted fifteen per cent. for running expenses and the balance divided among the pupil workers according to their productive capacity.

At the school in the city are taught clerical work, which comprises bookkeeping, stenography, and typewriting; paper-box-making and bookbinding; toy-making, and beadwork. At the suburban branch are taught shoemaking, galoche-making, tailoring, carpentry and cabinet-making, fur work, manufacture of artificial limbs and orthopedic appliances, wireless telegraphy, and horticulture. Instruction in shop work in the manufacture of artificial limbs has been found most successful. The shop renders services which are considered indispensable. It studies the needs of the workmen in the different trades, designs useful appliances for them, and produces any special device needed for a given purpose. The trade is appropriate for men who have worked with either wood, metal, or leather, and has recruited its pupils from the ranks of men who were mechanics, blacksmiths, wood and metal turners, harness-makers, plaster workers, and shoemakers before the war.

The course in fur work was started at the request of a number of fur merchants of the city of Lyons who were concerned over the shortage of workmen in their



Where There's a Will. With both arms gone, this poilu has found a way to do useful work again. He was taught at Lyons, where the pioneer schools of re-education were founded



New Tools for a New Trade. Soldiers disabled in Belgium's defense at work in the machine shop of Port-Villez, the Belgian re-educational school established on French soil

trade. They considered it a sound business measure as well as a humane and patriotic duty to create a supply of trained furriers to take the place of the Germans hitherto almost exclusively employed. The school was glad to open such a course, since the work can be done seated and is therefore suitable for men with amputated or paralyzed legs. A committee composed of five of the leading fur merchants of the city aided the school in organizing the course by inviting visits to their shops, by furnishing plans, and by selecting a foreman. After the class was started, they continued their cooperation; they supplied skins on which the pupils could work, paid them for their work, and promised definite positions to those who finished the course.

A wireless telegraphy section was started at Tourvielle as a result of a conversation between M. Herriot and Colonel Ferrié, technical director of wireless telegraphy in the Army. Colonel Ferrié regretted the lack of good operators and at a time when wireless stations were being multiplied so rapidly. "So you want operators?" queried the Mayor of Lyons, "Good! I will provide them."

A few days later, a complete school of wireless telegraphy had been organized at Tourvielle. Pupils were easily recruited; teachers were found in the Seventh Regiment of Engineers, and equipment was obtained from the radio service of Lyons. Without waiting for accommodations to be built, the class started in a little room in the main building which at other times was used as a smoking and reading-room. The pavilion afterwards built for the purpose is divided into five rooms—two private rooms for the teachers, a large classroom, a sound-reading room, and an instrument room.

Poles and antennae of the most modern type have been set up outside.

In 1915 M. Herriot laid down the rule, "The school-teacher should be the first instructor engaged by a school for the wounded." Tourvielle has from the beginning had a school-teacher, and evening classes in school subjects have been held regularly from seven to eight every evening except Thursdays and Sundays. Classes are formed by grouping the pupils according to their previous education and their needs. The illiterate have lessons in reading, writing, and arithmetic, while the more advanced listen to lectures on different subjects.

These two schools at Lyons have proved the inspiration of and an example for over a hundred similar schools for disabled soldiers established throughout the French Republic.

In all the other belligerent countries movements were soon under way to restore disabled soldiers to self-support.

Belgium, under necessity of founding the institution on foreign soil, organized a school for the training and a factory for the employment of disabled soldiers.

Great Britain was slow in starting, but has now worked out a satisfactory system for re-educating her disabled men.

Italy followed very closely after the example of France and now has a series of local schools under the direction of a central committee at Rome.

Throughout Germany there have been started by private and local initiative schools or training centers.

Canada and the other British dominions recognized their duty to the men disabled in the war and set up public bodies to deal with the problem. And finally the

United States has followed and will attempt to improve upon the example set by the other belligerents.

"America, too, I know," writes John Galsworthy, "new as yet to this conflict and the wreckage thereof. Of that great warm-hearted nation, I prophesy deeds of restoration, most eager, most complete of all." May that generous prediction in generous measure be fulfilled.

During a period of little over three years the disabled soldier has come into his own and instead of being completely neglected is now offered thorough and modern facilities for training which will restore him to an independent and self-respecting position in the community.

CHAPTER III

ORDERS TO ADVANCE

THE soldier who has done his duty in military service, has been wounded and permanently disabled, must not after discharge from the army resign himself to dependence on his pension and to spending the rest of his life in demoralizing idleness. He must still continue to do his duty. He has made good on the field of action and he must make good again in the field of civilian endeavor, even though handicapped through his patriotic service. A line of one of our national anthems refers to the sounding of "the trumpet that shall never call retreat," and in spite of his wounds, the disabled soldier must not lose his courage and retire from the front line of endeavor. He now receives from his country very definite orders still further to advance and he has yet before him opportunity to prove himself a good soldier and a worthy citizen.

Now that nations have seen the light and are making effort to repair the injuries done their disabled soldiers in the past, the men themselves must play their part and help in every way possible to further the program.

One of the greatest aids in putting the disabled soldier back on his feet is drawn from the example of men who have successfully taken advantage of the training opportunities. In Great Britain the Minister of Pensions has issued a booklet entitled, "What Every Disabled Soldier Ought to Know" and which contains letters from men

who have graduated through training to success in civilian employment.

In schools for blind soldiers one of the principal functions is performed by blind men themselves who receive the newcomers and encourage them to start off with ambition to make their way under their new handicap.

Most lasting help is derived from the example of civilian cripples who under the great handicap of public opinion in the past and with every disadvantage against them have made good. By force of superior character and initiative these men have overcome the same physical handicaps under which their less forceful fellows have gone down to economic defeat. At one school for disabled men, one of the most helpful features has been a series of meetings for an audience of cripples, addressed by crippled speakers. One of these speakers was a man whose extremities had been frozen by exposure in a blizzard, with consequent amputation of two legs, one arm, and four fingers of the remaining hand. He had then become for two years an inmate of the poor-house. He told the county authorities that if they would give him just one year in college, he would never again cost them a cent, persuaded them to do so, and made good his prediction. He later rose to be speaker of the House of Representatives in his home state, and is now president of a flourishing bank in the middle west. "If your mind and spirit are straight," he says, "no other handicap can keep you down."

Another speaker had one leg amputated and started under this handicap with no educational or financial advantages whatever. The best job he could get was as a shipping clerk, but he soon found there was no future for a disabled man in a manual and unskilled job. Under

great difficulty, he attended night school, and finally obtained modest employment under civil service auspices. He now occupies a position requiring a high degree of expertness and experience.

A third successful cripple who spoke at one of these meetings was a man who had lost both arms in an accident; one is amputated at the shoulder, the other just below the elbow. He found almost hopeless difficulty in getting the first job, becoming meanwhile almost a vagrant. At last he obtained employment supervising a gang of unskilled laborers. From that point he has risen steadily. He has invented and manufactured his own appliances, with the aid of which he does practically every duty of daily routine—including putting on his collar and tie, engaging in a game of bowling, or pruning his own peach trees. He was elected by his county to be justice of the peace and later was thrice chosen for the responsible task of county judge.

Such indomitable courage in the face of adverse circumstances cannot fail of inspiration to other men handicapped in the same ways. The disabled men themselves urge their fellows to obey the new order to advance.

CHAPTER IV

FIRST STEPS TO SELF-SUPPORT

With the medical department of the military organization lies the first responsibility and by all odds the greatest task in dealing with the disabled soldiers. A very large proportion—about eighty per cent.—of the men handled through the hospitals overseas successfully recover and return to the front for further service.

Of those returned from overseas almost ninety per cent. are candidates for physical reconstruction only. About twenty per cent. are permanently disabled, partially or totally. Half of this number, however, are able to go back to their former occupation, without the need of re-education. The other half, or ten per cent. of those dealt with by the reconstruction hospital, require special training.

It will be evident, therefore, that the task of caring medically and surgically for the injured soldier, is one of immense magnitude. It has taxed to the limit the facilities of the medical corps of our allies, and in providing for similar work in this country, the Surgeon General of the Army will need and deserve the unstinted financial support of the legislative authorities and moral support of the people as a whole.

The reason why this job of physical reconstruction of wounded men has not received wider public attention is that the marvels of medicine and surgery are not entirely new to us, while the economic reconstruction of the tithe of the total who would otherwise be destined

for the social scrap heap is of very recent development, and has seized upon the public imagination. Yet without the work of the medical corps, re-education would lack a sound foundation on which to build.

In the reconstruction hospital of the present day, the injured soldier receives not only the standard and routine treatment but also attention from specialists, such as is available under ordinary circumstances to the rich man only. This intensive treatment continues as long as there is room for improvement. During its course occupational work with a therapeutic object plays a rôle of surprising importance.

The current conception of a hospital pictures a large ward with rows of white beds along both sides, and with the occupants of the cots lying quietly back on the pillows waiting to get well. One can imagine the state of mind such an existence would engender. Every worry, every apprehension, every symptom possible of adverse interpretation would get one hundred per cent. attention from the patient. And in competition with this mental concentration on self and self's ills, there is nothing but the once-daily perfunctory statement of the doctor: "You are getting on very well."

That a worried and fretful mental state has an injurious reflex upon the course of an invalid's recovery is well known. Any means, therefore, by which the mind may be occupied and directed to some other object than the patient's own ills may be expected to have beneficial results.

Experience has shown that one of the most effective curative agents at the disposition of the physician is occupation. Simple work of the hands can be started while the patient is still ill in bed, and increased in



Back at His Old Job. This American was a draftsman before he was injured in battle. He is making good use of his time while convalescing at Walter Reed Hospital, Washington, D. C.



An Early Start. While still in bed, this American soldier is taught typewriting, to keep his mind off his own troubles and to help him in his future calling. U. S. A. General Hospital, Lakewood N. J.

amount and consequence during the period of convalescence. So in recent years teachers of "occupational therapy" or of "bedside occupations" have come to form part of the staff of the best civil hospitals, and in the military hospitals they are now considered a necessity.

From the point of view of mental therapy it matters little what lines of occupation are offered, provided they interest the men. The more fascinating and engrossing the work, the better the mental results attained. There must be some product in which the patients will take satisfaction—which perhaps they can take away at the end of their stay in the hospital—for without product interest cannot be long sustained.

From the point of view of physical therapy, it is desirable—other things being equal—that the manual exercise involved shall contribute to the process of physical restoration. If a man with injured fingers can be set at an occupation which will bring the fingers actively into use, more will be gained than by many periods of massage. The same principle applies to the more extended occupational work after the bedside stage.

While primarily curative in object, the choice of subjects should also be considered from the economic point of view—though not to the prejudice of the physical results. A man is to be a long period in the hospital, and during his stay is to be occupied. If the simple experience and training can serve to brush up his skill in or extend his knowledge regarding the employment to which he will return, so much the better. In other words, his hospital occupation should be as purposeful as possible.

In the early days of occupational therapy, the subjects were largely limited to those of the kindergarten: bead-

work, basket weaving, knitting, clay modelling, and the like. These are now coming to be added to and in many cases supplanted by more consequential ones such as typewriting, weaving of textiles, mechanical drafting, telegraphy, and it will be the duty of those carrying forward this work to add still further to the list. For the foreign speaking or the illiterate the teaching of English is another excellent subject for hospital instruction.

If the patient understands the work to be useful he will enter upon it with more enthusiasm and vigor, and the results will be proportionately improved. When the activity can in any way be related to the man's future job its import becomes even greater. It is hardly fair to keep a man knitting when he may as advantageously take up some more masculine and practical occupation. These principles are coming more and more to be realized by the military medical authorities.

One of the most interesting branches of the medical work has as its aim the restoration of function—overcoming limitation of movement in joints, re-training muscles, and the like. This work is usually known as "functional re-education."

The modern principle is that the exercises to restore the impaired function shall be active operations by the patient, rather than passive manipulations by hand or machine. At Hart House, in Toronto, Canada, there is in progress most interesting work of this character. All of the instruments have registering dials so that the disabled man can see from day to day to what angle of motion, through his own effort, he attains. The visible improvement encourages him, and the showing on the dial is a constant incentive to excel his previous record.

The process brings the patient face to face with his disability, and leads him to concentrate upon the effort to overcome it. The man thus learns the habit of self-treatment and, even outside of regular treatment periods, does what he can to further his recovery.

Another type of treatment to restore function consists in prescribed work in a curative workshop, a method already initiated in the more simple occupational activity. If he has a stiff elbow the soldier is set to work at a machinist's bench and in the interest developed in the work in hand, uses the file so as to give the joint highly effective exercise. In this instance the active exercise with a therapeutic end is unconscious—just the reverse of the situation in using the registering machines already described. The man hardly realizes, in his interest in the work itself, the curative object in view. One obvious advantage is that the exercise desired can be kept up most of the day, which would be impossible with a more formal system of treatment.

In the words of the officer in charge of one of the British military orthopedic hospitals: "If you give a man a damp rag and set him at work cleaning windows you will see that he is continually working his fingers as though grasping a spring dumb-bell. But while he would tire of the dumb-bell in a few minutes, he will clean windows for several hours without excessive fatigue." The man busy sawing a piece of wood going to make up the framework of a piece of theatrical scenery is really engaged in working an injured elbow back to health. The carpenter planing so vigorously has nothing manifestly the matter with his hands; in matter of fact he has a stiff ankle, but as he works he thrusts forward his right leg with each move in order to get more power into his stroke,

and in so doing unconsciously works his lame ankle all the time.

Games and recreation play another important rôle in the curative process. They furnish a form of unconscious exercise for stiff joints and muscles. The competition and enjoyment are also factors of positive value, bowling, quoits, badminton, hand-ball, billiards, and tennis have all found place in the program of reconstruction hospitals and convalescent homes.

When physician, nurse, and hospital aid have done everything possible to advance the physical well-being of the wounded soldier, and it becomes evident that in spite of them all he will be permanently handicapped, the attack on his individual problem veers its direction. A plan for his future which will lead to usefulness and self-support must be laid out. More accurately the man himself must determine upon a plan for his own future, though he may be helped and guided to it by friendly counsel.

The first difficulty is encountered in the acute depression and discouragement entailed in the serious disablement of a healthy vigorous man—for the men on the fighting line are physically the flower of the community. He knows the fate of his friends or fellow-workmen who have in the past been crippled, blinded, or otherwise injured. They have gone down many rungs on the social and economic ladder. The man who was a machinist became a messenger, the electrical worker became a watchman, the skilled baker now peddles pretzels, and the plumber now sells shoestrings on the street corner. Is it any wonder the outlook to the newly disabled man does not look bright?

Again, it seems to him as though life would hold no pleasure in the future, and that he will always feel sensitive regarding his handicap. Besides nobody has much use for the disabled. And these deductions have much basis in precedent and observation.

This state of mind will be encountered in the invalided soldier. It must be met early—in the base or special hospital abroad—and overcome. Arguments drawn from the black past history of the disabled must be outweighed by those drawn from the hopeful experience of modern practice. With returning health, initiative must be reawakened, responsibilities quickened, a heartened ambition must replace discouragement. We can go to him and truthfully say: "If you will help to the best of your ability, we will so train you that your handicap will not prove a serious disadvantage; we will prepare you for a job at which you can earn as much as in your previous position. Meantime your family will be supported and maintained. Finally, we will place you in a desirable job."

To this end it is vital that doctors, nurses, and aids in the military hospitals abroad shall have a full realization of the principles and practice of "reconstruction." They must be able to visualize to the man his future opportunities and possibilities so that, from the first, every contact and influence may operate to encourage rather even than to countenance despair.

During the period of depression the only point of comfort is dependence on the pension which becomes the due of every disabled soldier and sailor. The man begins to figure on how he will manage to exist on the stipend which he will receive. And in most instances a small stipend it is indeed. In the United States the scale is the most generous of any country in the world.

Granted a constructive and effective program for the reconstruction of the disabled soldier and sailor, a low pension scale may be a blessing in disguise, in that it may force the men to make plans for support through their own efforts. Their first reaction, however, when a constructive plan is presented is fear that increasing their earning power may jeopardize their pensions, and a reluctance—until the pension is determined—to undertake any instruction which would improve their economic status.

The success of any system of re-education is contingent upon a very clear understanding that pensions will not be so prejudiced. Most of the countries at war announced that pensions were determined by physical condition alone. It was further stated that a man could take training and go out to earn more wages than he was paid as an able-bodied workman before enlistment and yet have his pension undisturbed. This did not sound credible to the men, however, and the facts had to be stated again and again. In all the Canadian hospitals, convalescent homes, and training schools placards setting forth this principle relating to pensions are prominently displayed.

The only country to delay definite statement on this point was Great Britain, and her early re-educational work was greatly handicapped thereby. But in the most recent British pensions warrant a soldier totally disabled in military or naval service receives for his lifetime the sum of 27*s.* 6*d.* per week. In proportion to rank this sum is increased. For pension rating a man is accounted totally disabled if he has lost two or more limbs, a limb and an eye, the sight of both eyes, or incurred other stated disabilities. He is regarded as being eighty per

cent. disabled—and thus entitled to eighty per cent. of the total disability pension—if he has suffered the loss of both feet, a leg at the hip, a right arm at the shoulder, or the loss of speech. A short amputation of the thigh, the loss of a left arm at the shoulder or of right at or above the elbow is regarded as a seventy per cent. disablement. The scale proceeds through a schedule of disabilities down to a twenty per cent. disability, for which one-fifth of the total disability rate is paid. For lesser injuries the man is paid, once and for all, a lump sum, termed a gratuity.

The warrant states that "when a permanent pension has been granted it shall not be altered on account of any change in the man's earning capacity, whether resulting from training or other cause." A certain injury, therefore, means a certain pension, and there is no authority with discretion to decrease the amount. When this was once clearly understood it made all the difference in the world in the attitude of the men toward re-educational proposals. Many men who have been trained are, with both their wages and pension, better off financially, than before their injury. For a man with both legs off, from the economic point of view clearly is not totally disabled, and even without a pension might earn more than before his enlistment in the army.

With the pension difficulty out of the way, we must return to the effort to have the man decide to carry on to self-support. There are several considerations pertinent to his decision.

First is the attraction of the temporary war job. Under the abnormal labor conditions existing in time of war even a disabled man can go out and get employment at an amazing wage. That such a job is temporary,

that it has no future, and that it affords no experience of value are truths only evident on second thought. They must be clearly demonstrated to the wounded man.

In the second place the soldier has been long from the routine and responsibilities of the civilian community. His life has been one of danger and excitement, but as related to the ordinary functions of existence has been automatic, regulated in every particular. A man will view with reluctance a return to the responsibilities of a voluntary enterprise, such as his course of training will be.

In illustration of this state of mind Major John L. Todd, of Canada, cites the case of a returned officer who found it difficult to make up his mind in the ordering of a meal from a menu placed before him. "A civilian is accustomed to order his meals, to do everything for himself. He goes into the army and serves four years, during which time all his meals are chosen for him. The hour when he should go to his meals is decided for him. Suddenly wounded, he is no longer fit to be a soldier, and turned out into the world to unlearn just those things which have been taught him with such pains and effort."

With regard to the reluctance to take up again a regular routine, it can be argued that a man must, sooner or later, re-assume his civilian responsibilities, and that this will be much easier and more satisfactory if he has prepared to meet them.

The third consideration is that the soldier has been away from home for a long period, and his most urgent desire is to get back to his family and friends. Against this desire, a discussion of prospects for the future does not seem to carry much weight. Tactful persuasion of



Improving the Mind. Back from the war disabled, these men are learning English in the hospital at Lakewood, N. J.



American Boys "Carry On." A U. S. soldier, minus a left arm, learning the operation of a simple machine at Walter Reed Hospital, Washington, D. C.

the man, however, supported by the encouragement that the social workers dealing with the family are able to inspire can often effect the right result.

And finally is the tendency of the disabled soldier to conceive that he has done his duty by his country and that he should now be supported for the rest of his natural days at national expense. This is largely a question of personal character. The weak and shiftless come easily to this servile point of view, the strong and self-dependent shun it vigorously. Again, the family influence will often be the deciding factor, and this can be largely moulded by the home service visitors. The adviser in the hospital has here a job in character building and it will be found that this type of effort is essential all through the rehabilitation process.

Final decision on all these points of consideration will depend in large degree on the caliber of the men who as advisers are put in touch with the disabled soldiers. Personal strength and force are at a premium. The strong man will make a success of this preliminary work —the average man will fail. If it should be asked what is the greatest need of the disabled soldier the answer would be—not industrial school equipment, not elaborate courses, not splendid buildings—but the finest men the country affords to help him in the critical period immediately following disablement. Where there is found exceptionally successful work with injured soldiers, there will be found a man of unusual qualifications. In Great Britain experience has shown the need for picking most carefully the executive secretary of local war pensions committees to deal with disabled soldiers and sailors, for upon the man chosen turns the success or failure of work in the district.

It is to be hoped that the one place where a re-educational organization will not economize is in the salaries of the men to become the friends and advisers of the disabled soldiers. No precedent, no existing scale of payment, no red tape must interfere with taking for this work the pick of our human resources. Such an injustice to the returning service men could never be condoned.

CHAPTER V

THE NEW SCHOOLHOUSE

ONCE the disabled soldier has made the decision to carry on, he should be given the advantage of a course of training wisely planned and capably executed.

The plan of re-education is to train a man for a job in which he can perform one hundred per cent. efficiently in spite of his handicap, to find a process in the performance of which the disability will be no drawback whatever. With the wide variety of industrial processes today, it is entirely possible, with care and ingenuity, to find specific jobs which men with all types of handicap can follow. For the man with serious leg injury, there is sought a seated job; for the man with arm injury, work which can be done with one hand only; for the man with lung difficulty, outdoor employment; for the blind man, work in which the senses of hearing and touch are the primary essentials.

For even the most seriously disabled cases, well-paid jobs can be found. The manner in which the problem is approached can best be illustrated by several specific instances. A man with both legs off, if trained thoroughly as a linotype operator, can hold down his job and deliver as much product as his fellow workman with sound legs. He comes to work in the morning, sits down on his chair, and need not get up from it until the close of the working day. The work is all done by his hands. In this job is such a man disabled?

A man with one arm is trained as a painter and given a job in a furniture factory striping chairs, for which work he would use only one hand, even if both were sound.

The man with lungs weakened by tubercular infection, gassing, or exposure, can be trained as a chauffeur and found a job at which he is in the open air all the time. In this way, his health is protected and his disability practically offset.

The blind man can be trained to assemble the parts of small machinery. He is given the component parts on a bench at which he is seated and, beginning with the frame, adds part after part in regular sequence. Is this man at any disadvantage in comparison to his sighted colleague?

Yet all these jobs are well-paid, and disabled men can be trained for them without difficulty. Preparation for them restores self-respect in that the man does not have to ask favors in seeking employment of such skilled character.

It is not, of course, entirely easy to find just the job which men of different types of handicap should follow. Work of this kind is entirely new, and training in the highly skilled lines has not been attempted in the past by those who have been concerned in the education or placement of disabled men. Industry must therefore be examined in the most thorough and comprehensive manner in order that the jobs sought may be disclosed to the training and placement authorities.

One of the best means to this end is the conduct of industrial surveys with the aim of disclosing employment opportunities for the physically handicapped. In fact such surveys are essential to intelligent work for the disabled.

When the British Pensions Ministry took over the responsibility of training disabled soldiers for self-support, an arrangement was effected with the Department of Labor to make studies of openings in industry for disabled men. Each industry was considered by a committee which was familiar with its possibilities, and the findings of this committee were published for the benefit of local training officials.

Up to date these committee reports cover attendants at electricity sub-stations; employment in picture theatres; custom tailoring; agricultural motor tractor work; furniture trade; leather goods trade; hand-sewn custom boot and shoe making and repairing; gold, silver, jewelry, watch and clock jobbing; dental mechanics; aircraft manufacture; wholesale tailoring; boot and shoe manufacture; basket-making trade; building trade; engineering; printing and kindred trades; picture frame making.

The most complete investigations, however, have been carried out in Canada under the Vocational Branch of the Invalided Soldiers' Commission. Whole industries have been surveyed at first hand by competent investigators who bore in mind the needs of the soldiers in whose behalf the information was gathered. Before the work was started, a classification was made of the various disabilities which would be met with, and the availability of the trades to men with these handicaps was carefully recorded. In every report will be found a statement regarding the suitability of the trade for leg cases, arm cases, the deaf, and so forth.

The surveys also comprised a full statement of the method and practice of the industry, so that placement agents and vocational officers might have a very clear

and succinct idea of the trade requirements for which men are being prepared.

In the United States some small beginnings have been made on similar work. It was found by the employment department of the Red Cross Institute for Crippled and Disabled Men that there was needed more accurate knowledge regarding the possibility of getting jobs for cripples in the leading industries of the city. Investigators were sent out in a very informal way to look into the openings in various trades and report back upon their observations. Over forty industries have already been studied in this way, among them the piano, leather, rubber, paper goods, shoe, sheet metal goods, candy, drug and chemical, cigar, silk, celluloid, optical goods, and motion picture industries. Similar work on a more ambitious scale has now been undertaken by the Harvard Bureau of Vocational Guidance, which has started with examinations of coppersmithing, the shoe industry, and rubber manufacture.

Industrial surveys of the character described serve three specific ends:

1. They show in what specific jobs the individual disabled man can be placed. If the man has general experience in some trade, it is possible for the placement officer, who could not otherwise know in detail the circumstances in a particular occupation, to send out the applicant with a good idea of what job he should apply for and with a very clear conception as to whether he is competent to hold it down.

2. It gives educational officers a good idea as to the lines in which disabled men can be placed for training in factories or mercantile establishments under the apprenticeship method.

3. The surveys oftentimes discover subjects which are desirable for school instruction of disabled men. As a matter of fact, when any particular line is under consideration for addition to the curriculum of a school, one of the best criteria of desirability is a thorough industrial survey of the trade for which the course will prepare.

The actual experiences of cripples who have been employed in various trades will, if recorded, afford valuable data for the placement of other disabled men. In one employment bureau, it is the practice to ask every cripple in considerable detail regarding his employment record. If he found one trade possible with his disability or another one out of the question by reason of his handicap, these data are recorded and provide a good basis for dealing with another cripple of approximately the same handicap and experience.

In picking out the subjects of instruction for a training school among those which surveys of the trades have disclosed as possible for the employment of handicapped men, selection should be made according to the following criteria:

1. The trade should pay well, as otherwise it will hardly profit the soldier to take a thorough course of training to prepare for it. It is frequently found that among trades which require almost equal ability and training, one will pay good wages and the other will pay poorly, due to commercial influences of one kind or another or to labor conditions.

2. It is necessary to pick out a trade which is growing rather than on the wane. In other words it must be one in which there is constant demand for a new supply of skilled labor. Such a condition will insure steady em-

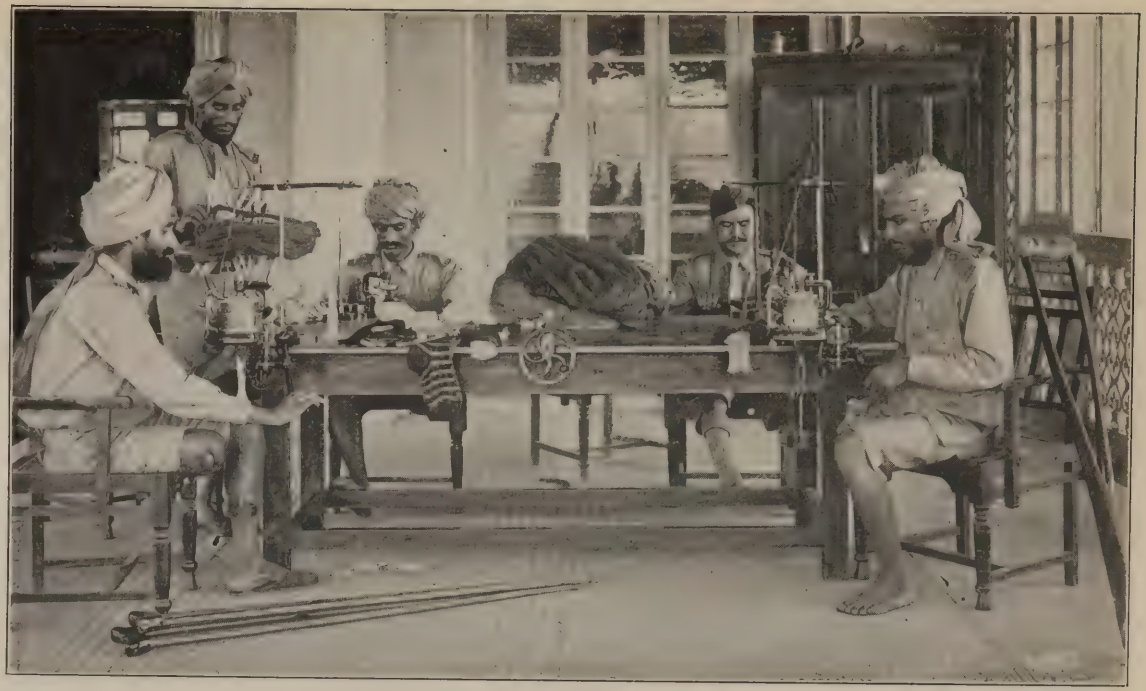
ployment and the prompt absorption into the labor market of graduates from the training course.

3. Trades which are seasonal in character should be avoided. The placement of a disabled man is a fairly expert and careful job and it should not be repeated any oftener than is absolutely necessary.

4. The trades selected as instruction subjects should be teachable and should not depend in too large degree upon native ability or talent. For example, some of the artistic or craft lines require almost an artist's ability, and among a large number of disabled men, there might be only one who could possibly take advantage of the training.

5. And the trades must be teachable within a reasonable length of time. While men may be willing to defer for some months their return to regular employment, they will not have patience for a long period. Being adults, they would feel some of the best years of their life were slipping away from them and that the training was not worth the cost. At many schools in France instruction in tailoring had to be given up because it required eighteen months to bring a man to the point of proficiency, and the soldiers would not wait that long.

6. The occupations for which training is given must not be those in which there must be expected labor disturbance or over-supply at the termination of the war. It would be hard, for example, to find an employment better suited to a one-legged man than automobile driving. Yet the British Pensions Ministry has sent out instructions that no disabled men are to be trained for this work. The explanation is that motor transport has, in the present war, displaced the army mule, and that tens of thousands of enlisted men have been trained to



India's Men Go to School. At Queen Mary's Technical School, Bombay, disabled soldiers of the Indian forces are taught to shun the beggar's calling and prepare for useful lives



The Future Shipworker. A disabled man learning oxy-acetylene welding in the shop conducted by the Red Cross Institute for Crippled and Disabled Men

drive the automobile trucks. These men are receiving the most versatile experience a chauffeur could have, and at demobilization they will be turned out into the civilian labor market to seek employment. The disabled man should not be submitted to this unusual competition.

In actual practice the most popular trade being taught to crippled soldiers is "motor mechanics," that is, the operation and repair of automobile engines. Too popular the school directors think it, for almost every man asked to express his preference as to subject elects to train as a motor mechanic. There could be no better proof that the automobile still has glamour in the public eye. The work manifestly appeals to the men's imaginations, and they want to go into it whether their ability lies in that direction or not. So the job of the vocational director is to dissuade many from this first and seemingly universal choice. Otherwise, according to one authority, "all the disabled soldiers in Canada would be garage workers," and there would, of course, be available employment for but a few of them.

The aim of the courses is to train repair men for garages rather than chauffeurs. A specialized branch of automobile mechanics is the operation of agricultural tractors, an infant branch of the motor industry, but a growing one. Geographical influences determine this specialization. Whereas a motor class in Montreal will work with commercial trucks and pleasure cars, a similar class in a western province of Canada will take its training on farm tractors.

The various branches of electrical work offer another good field of instruction. In London the Institution of Electrical Engineers, in cooperation with Northampton Institute, arranged courses to train switchboard attend-

ants for electric power houses, the classes being open free to disabled soldiers. The success of this work was proved by the employment of every man the day his course was completed. At other points in England war cripples are taught armature winding, magneto assembling, inside electrical wiring, and general repair work. In Germany there is electrical training at various centers, notably at the great school in Düsseldorf. There is little instructional work along this line in France. Electrical trades have the advantage of great industrial stability. They are growing steadily, the wages are good, and the employment is not subject to seasonal fluctuation.

Another popular subject of instruction is moving picture operation. This work is well-paid and fascinating as well. The employment demand seems unlimited as the number of "movie" houses is growing every day. The training comprises simple work in electrical wiring, and operation of the projecting machines. Some of the latter now run by motor, do not require the grinding of a crank, and can thus be handled by men with certain arm injuries.

To pass to a subject of another kind, cobbling has been found a good trade to teach a certain type of man. It is especially suitable for leg cripples. In large cities a reasonable number of men can be placed in shoe repairing shops, but in the smaller communities and in the rural districts the returned soldier can set up business for himself and build up a good trade. The required mechanical equipment is simple, and can be rented rather than purchased outright. This subject is taught in practically every country providing vocational reeducation, but is particularly popular in France where it is represented at Paris, Lyons, Marseilles, Bordeaux,

Cherbourg, Havre, Limoges, Montpellier, Rouen, Toulouse, and at dozens of smaller centers throughout the country. Some of the French cripples combine with cobbling the repair of sandals and wooden sabots.

The making of artificial limbs and orthopedic appliances has been found a good trade in which to instruct war cripples, and it is certainly as appropriate a line as any in which a maimed man could engage. This fitness is more than theoretical for most of the leg makers today are men who are themselves minus one or both of their lower limbs. In addition the trade is in a boom condition at the present time due to the extraordinary demand for limbs for crippled soldiers.

The number of trades being taught is legion. Their choice is usually dictated by the labor needs of the communities in which the particular school is located. Among those which have found fairly general adoption are tailoring, printing, telegraphy, machine tool work, sheet metal work, and toy-making.

To illustrate the combination of trades taught at any individual school, the list of courses at a few of them may be of interest. At Montpellier are taught: shoemaking, tailoring, carpentry and cabinet-making, varnishing, wood-turning and carving, metal-turning, mechanics, tinsmithing, harness-making, binding, dental mechanics, hair-dressing, the manufacture of artificial limbs, operation and repair of automobiles, industrial design, and bookkeeping;

At Düsseldorf: metal work, mechanical engineering, telegraphy, electrical work, carpentry, cabinet work, wood-turning and carving, locksmithing, sculpture, stone-cutting, painting, paper-hanging and plastering, printing, photography and etching, cardboard work, leather work,

bookbinding, dental mechanics, farming, stenography, typewriting, bookkeeping;

At the Montreal Technical School: drafting, motor mechanics, civil service, business, English and French, stenography, carpentry, French polishing, pattern-making, electric wiring, mathematics.

After possible and favorable subjects of instruction have been selected, however, it still remains to fit the individual to a trade. For doing this there are no general rules, and for ten cases of exactly the same handicap there will be ten different industrial decisions. The matter is determined principally by the past occupational experience of the soldier. He is a man, not a boy, and his education has been gained more in employment than in school. The new beginning is made, therefore, with a certain vocational preparation which must not be wasted. The aim is to synthesize preparation for the future from two-thirds former experience and one-third re-education designed to utilize that experience under the new conditions of physical handicap.

This rule has been followed universally by the re-education authorities in all the countries at war. The Germans report ability to return all but one man out of twenty-five to his own line or one closely related. In this way training requirements are minimized, and the man has the best possible foundation for his new start in the world of industry and employment.

A few examples can show, superficially at least, the way this works out. A freight trainman who has left a leg behind him in the base hospital is not in shape to return to his old job. Let us presume that studies by the vocational authorities have shown that operating the keyboard of a type-composing machine is an excellent

trade for a leg cripple—as it is. Shall the disabled train hand be re-educated as a machine compositor? The answer is emphatically no, for in this event all his railway experience would go into the discard. Special considerations not indicating to the contrary, however, the amputated soldier may be trained as a telegraph operator and sent back on the railroad to employment in a switch tower or the train despatcher's office, in either of which positions all his familiarity with rolling stock, train schedules, and general railway practice will stand him in good stead.

There is added advantage in such a case that the man can be referred for work to his former employer who is fully acquainted with his record as to reliability and faithfulness. All the employer need then require is a certificate of the veteran's proficiency in his new rôle.

On the other hand, presume a man who had been a hand compositor in a printing office came home with serious leg disability which precluded for the future his holding a standing job. Should this man be trained as a telegrapher, which proved a good trade for the other leg cripple? But again the answer is negative, for the precious print shop experience would be wasted. Training as a proofreader, however, would put it to good use.

Some men may be raised another peg in their own trade, and their employment education thus conserved. A building carpenter, who may suffer from one of the thousand-and-one disabilities which are not apparent, who is so weakened physically that he cannot go back to work handling beams and joists, can be trained in architectural drafting and the interpretation of plans and prepared for a position as a foreman or inspector of construction. His former experience will be the best

possible preparation for this job, for he will know all the tricks of the trade, and very little will get by him.

An educator in one of the allied countries has pointed out that very frequently disabled men who have taken advantage of training go out to better paid jobs than they held before their injury. The position in any given line that requires less physical capacity usually is the one that requires more skill and head-work, and as such, carries with it higher earning power.

The disabled farmer is somewhat of a special case, but he too should not abandon the occupation in which he is experienced. If he cannot return to pitching hay, he can be trained for poultry raising, dairy-work, bee keeping, or other of the lighter agricultural specialties. He will then not be subjected to the revolutionary change involved in transporting a confirmed countryman to industrial work in a large city—conditions under which he is extremely likely to be unhappy.

There is another reason why the agriculturist should stay on the farm: that the nation may profit by the continued labor of a food producer which it cannot afford to lose. In France there has been a country-wide propaganda to this end, and posters and booklets have set forth the exhortation: "*Agriculteurs, ne changez pas de métier.*" The movement from the farm to the factory is already too pronounced, and in the European countries the farm workers have seen it was they that were sent first to the trenches, while many of the industrial employees were kept at home in the munition plants. Determined efforts have been made to counteract the trend, and great ingenuity has been addressed to the solution of difficulties in the path of the disabled farmer.

There still remains to be considered the man without real occupational experience. A soldier of one type may have held in the two years prior to his enlistment ten different jobs—all makeshift in character and all ill paid. He may have left school at fourteen and been under the necessity of going to work to help support the family. In such an instance he would never have had a chance at a skilled trade. Now that he has gone abroad and been injured in his country's service, is this man to be denied the chance he missed earlier in life? It should be the pride of the community to give it to him.

Representative of another type is the young man who may have gone into the army direct from high school. In the American forces, so largely made up of youngsters, cases of this kind will be numerous. When this youth graduates from military service, a disabled veteran, he should be provided with the same vocational advantages as he might have availed himself of had not the war rudely interrupted his educational career.

With both these types there is no past experience to serve as an occupational determinant for the future. Choice is therefore free, and the usual principles of vocational guidance will apply.

For the man with superior mental qualifications little assistance in readaptation is necessary. He will find a way to keep on with his work. Professional men can, in spite of even serious handicaps, continue in their own line. Disability does not mean as much to the head worker—architect, chemist, statistician, or designer, as it does to the manual worker—machinist, textile worker, stone mason, or shoemaker.

Most of the men of mental qualifications who will profit by re-educational provision by the national authori-

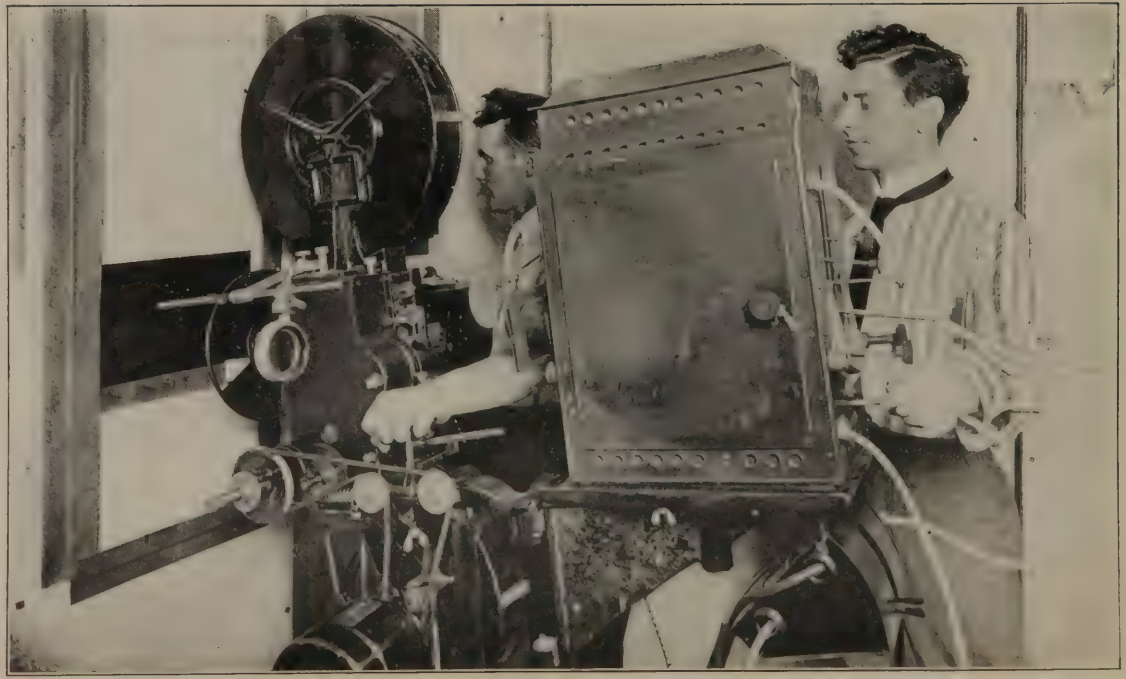
ties, are the younger soldiers who can take up or continue courses at universities or professional schools. The range of training should not be limited to the trades; the educational opportunity should only be conditioned by the talents and possibilities of the pupil. In Canada numbers of men have been sent to college with their living expenses and tuition paid by the government, and the same situation will doubtless ensue here to as great if not a greater degree.

And finally, there is the man without enough mentality to make possible his training in a skilled trade. After it is clear that nothing can be done for him vocationally, he may, as a last resource, be equipped with as effective mechanical aids as possible to offset the handicap of his disability, and returned to manual labor. If foreign-speaking his chances may be improved by teaching him to speak English. Luckily, however, cases of this character will be few among men of our own forces, by reason of the high standards of admission to and retention in the army. A densely stupid man would never get as far as the front line overseas.

The courses of training must be intensive and practical rather than theoretical. Every feature of instruction must be evaluated according to whether it affords direct assistance to the man's earning a living. A mistake that has often been made especially by universities and other institutions of higher learning is to give the disabled soldiers the elementary first-year schedule of a regular four-year course. This gives them a little of everything and complete familiarity with almost nothing. What must rather be done is to pick the essential and practical features out of the whole four-year program and condense them into the compass of a short course.



A Cheerful Pupil. French soldiers at the École Joffre, Lyons, learn to operate machines



A Motion Picture Operator in the Making. One of the most popular trades taught in the Red Cross Institute for Crippled and Disabled Men

In place of grinding for a final examination upon which academic rating may be established, it is better to devote the last one or two months of training to practical work in the field for which the training prepares. When the students' association at Calgary, Canada—made up of the returned soldiers being trained at the Institute of Technology and Art—were asked for suggestions regarding how the instruction might be improved, they answered that their chief concern was that they should know when they went out to a job just what was expected of them. The apprehension was that they might be made ridiculous and show up as inexperienced in comparison with other workmen who might be hired for the position. To eliminate this possibility the men are put, before graduation, at actual work of the same character as will be required by their first employer. For example, the men training as operators of gasoline tractors are set to plowing virgin prairie and doing other miscellaneous farm work, all under helpful supervision by their instructors. They go out, therefore, not as novices but as full-fledged workers.

In like manner, at Winnipeg, Canada, the men who have been trained for clerical positions are put for the last month of the course in a model office, equipped with all the modern appliances such as adding machines, billing machines, filing systems of all kinds, telephone switchboard, and the like. Such equipment does not embarrass them, therefore, when they go to their real work.

It has already been pointed out that courses must not be too long, and that this necessity serves to exclude some subjects from choice for the training of disabled soldiers. Nine months is as long as the average course

can wisely take, and one year is usually the limit. The Canadian authorities endeavor to make most of the courses come within six months. Many subjects can satisfactorily be taught in an even shorter time, for example, power station switchboard operating, oxy-acetylene welding, and so forth.

A question closely related to the manner of teaching is that of character, source, and training of instructional officers. Whether they shall be drawn from the ranks of teachers or from among engineers or manufacturers is a subject of wide discussion. The tendency in Canada now is to depend on the latter source, the argument being that the problem is industrial rather than educational, and a material proportion of the training is being done in shops. In Great Britain the solution is clear, since most of the work is done in already existing and organized technical institutes, whose regular staffs carry on the teaching. In the United States the first workers are being drawn from the vocational education field, some of the men having been given a special course of study in New York and travel and observation in Canada, in order that they may know how to apply their own particular technical experience to work with the disabled soldier. If such men serve as directors or vocational advisers, it is fairly simple to draw the actual instructors from trade workers and imbue them with the right social spirit in dealing with the men. It needs teachers of manifest experience and competence to command the respect of the disabled soldiers.

It becomes of increasing importance as the war progresses to recruit as directors and teachers returned soldiers who have seen service at the front. They get better work from their pupils and are in an infinitely

better position to maintain discipline. The man wounded overseas tends quite naturally to regard stay-at-home citizens as slackers, and he demands employment of veteran comrades in their stead.

It has required some courage in Canada to stand out against the demand for appointment to a job of a returned soldier of inferior qualifications rather than a civilian of marked ability. Now, however, the great majority of representatives of the Invalided Soldiers' Commission have seen overseas service. In the repatriation service of Australia the minister recently reported that ninety per cent. of the men on the payroll were returned soldiers. Immediately the voices of parliamentary members were heard in criticism that the proportion should have been still higher.

If the military officers are used in any relation to re-education, it is practically essential that they be officers themselves invalided from the front. The soldiers regard the uniform as the badge of a fighting man, do not look kindly on its assumption by stay-at-homes, and practically refuse to acknowledge the authority of an officer who has not seen actual service. Of course, this necessity does not become operative until some little time after belligerency begins.

In setting out to provide for the re-education of disabled soldiers what facilities should be employed? Can existing facilities be utilized or must special schools be erected or organized?

The ideal arrangement would be to assign men for training—under national supervision and at national expense—to a special vocational school for the disabled, but these practically do not exist. The reason why this would be desirable is that the staff would be already

familiar with the particular difficulties of the disabled man, and experienced in dealing with him. The rehabilitation of the physically handicapped is not wholly an educational or industrial problem—it is very largely a social one.

The men who might be highly successful in the vocational education of young men might fail of the patience requisite to the training of the disabled. Due perhaps to the past public attitude toward the crippled and blind, perhaps to expectation of future support by pension or compensation, perhaps to a feeling of helplessness on the part of the man for going out again into industry, there is certainly a psychology of disability and as surely a social philosophy for meeting it. Although preparation of teachers and directors by theoretical instruction and observation may accomplish much, real capability is attained only by actual experience with the disabled man himself. This experience the special school for the handicapped, if operated on modern lines, brings ready to the task. But although every industrial community needs such schools, they do not exist. Dependence for the execution of an extensive national program must in consequence be placed on other means.

The most useful facilities to hand are the existing vocational schools. These institutions have equipment and teachers and can undertake on short notice the training of disabled soldiers. It has been found necessary, however, to organize special classes for the soldiers rather than put them in the same classes as the boys under instruction. The men are mortified at the discrepancy in ages and being some time away from their school days are not as quick to catch on at first to classroom instruction. The necessity for special classes has

been clearly demonstrated in Great Britain where the already operating technical institutes have been largely availed of.

The utilization of these facilities is highly logical as it would be folly to purchase and install special mechanical equipment for the temporary need involved in the rehabilitation of wounded soldiers. The only justification for organizing a special school for the disabled is a permanent program for the rehabilitation of the handicapped—civilian as well as military. In such instances the separate institution is not only permissible but desirable.

The vocational schools have been very ready to come forward with offers of their facilities. In Great Britain most of the great technical institutes have organized special classes in general trade subjects for the returned soldier; for example, the Regent Street Polytechnic and the Northampton Polytechnic in London, the Technical Institute, Birmingham, and the Newport Technical Institute in South Wales. The courses at these schools are approved by the Ministry of Pensions which also pays tuition of the men.

Schools for teaching individual trades have also provided facilities for the war cripple. Examples of this are the school of diamond cutting at Saint-Claude, celluloid industry at Oyonnax, cutlery at Thiers, and watchmaking at Cluses, France; tool-making at the Metalcrafts Training Institute, boot repairing and leather work at the Cordwainers' Technical College in London.

Another type of vocational school is represented by the business college or clerical school. These can organize special classes and enlist a fair number of pupils. Clerical instruction is provided in most of the

military hospitals, and some of the men taking this work reveal talents and aptitudes which lead to their taking up a clerical specialty as their re-educational subject.

Still another vocational branch is agricultural training, which can be excellently provided by existing agricultural colleges. In France the national schools have made provision for the *poilu* put out of commission at the front; in Canada provincial schools of agriculture have undertaken the work; in New Zealand the Department of Agriculture is caring for the farm training of returned soldiers.

Still another class of educational organization which can be utilized to advantage is the university. While the vocational school for boys may have its full quota of pupils, the university in war time is denuded of students. And most universities today have engineering or agricultural departments which, otherwise idle, can be made useful indeed. McGill University in Montreal is training under supervision and at the expense of the Invalided Soldiers' Commission a large number of returned men. The University of Saskatchewan at Saskatoon is preparing many for agriculture. In the other Canadian provinces the University of Toronto and the University of British Columbia are contributing splendidly to the national program.

In conjunction with every military hospital giving reconstruction or long-time treatment some educational provision is necessary. Of course, this may consist only in teaching ward occupations and simple pre-vocational work. But in many cases it has been found wise to start vocational training during the hospital period. In connection with every "center of physiotherapy" in France is

a re-educational school. In England, at the Brighton and Roehampton orthopedic and limb-fitting hospitals, have been organized schools in which the men start their vocational training, which is continued, after hospital care is finished, as a post-graduate course at one of the London polytechnics.

During the early stages of the work in Canada, it was the practice to begin re-education while the men were still under medical care. Under new administration, on the showing of experience, a new ruling was made about the middle of 1918. This provided that no more men were to start industrial training until after discharge, and not then until after medical treatment was finished. Up to this point all occupation has a therapeutic objective and is carried on in curative workshops.

In cities and districts where there are for one reason or another no vocational education facilities which can be turned to the training of disabled soldiers, there becomes necessary the establishment of a special school of re-education to meet the need. There have been founded in this way a number of institutions which it is hoped will continue to train disabled industrial workers after the temporary need for the rehabilitation of soldier cripples has passed.

The leading examples of this type of school are at Lyons, France, and Düsseldorf, Germany. The former has been already described. The latter serves the men under treatment at fifty hospitals in the city of Düsseldorf or resident there after military discharge.

In analyzing the past experience and employment possibilities of an individual disabled man, the need for an extremely large number of instruction subjects is indicated. A recent listing of the subjects being taught to

returned soldiers in Canada showed a total of two hundred. When we proceed on the assumption that the individual is to receive training in the line for which he is best fitted, the variety of classes called for is beyond the range of any vocational school to provide. The question is then: How is instruction in the unusual subjects to be provided?

This necessity has given rise to the re-establishment of the apprentice system. More and more dependence is coming to be placed on training in factories and industrial establishments. Under this system the range of subjects is almost unlimited.

The employer must be willing to undertake very definitely the instruction of the soldiers, and detail one or more of his best men to this end. There must be regular supervision of the work and inspection of the progress made by the apprentice in order to guard against the employer using the men for routine production processes with little or no progress or educational value. He must not be allowed to regard their time as possible labor obtained free or at small cost.

On the other hand, properly regarded, the system confers real benefits on the employer. In the first place it affords him a source of supply for skilled labor which may be very scarce and difficult to obtain; for most of the men trained in a factory stay on in the same place as employees after their instruction period is over. Being familiar with the shop's practice they are worth more to it than to another establishment and, conversely, being more valuable as workers the employer can afford to pay them more wages than they could ordinarily earn elsewhere. In the second place, the employer can train the men in his own methods and to his own standards,

and prepare workmen made as it were to order. For these two advantages employers are frequently willing to operate apprentice schools and pay the pupils wages during their non-productive period.

In Great Britain no fees are paid to the employer for such training, and he is expected to pay the disabled men wages which will represent the net value—if any—of the men's labor in his establishment. The wages thus paid are deducted from the training allowance paid by the Ministry of Pensions. In Canada, in view of the very generous scale of pay and allowances, it is thought best that the man should not be paid wages. If the employer gives him anything, it is regarded in the light of a bonus and does not prejudice his remittances from the government.

A modification of the system of training men by placement in factories consists in starting the course of re-education in a vocational school and completing it in an industrial establishment. Subjects of training fall within classifications as to elementary preparation, and most of them are represented to some degree in the industrial schools. For example, a man who requires training as a silver-plater may learn the general principles of electricity in a school classroom and laboratory and then go out to a plating shop for training in the application of these principles in plating practice.

It is this combination of school and factory training which promises the widest development in the future.

One great advantage of having part or all of the training done in a factory is that the work is practical in the highest degree, taking place as it does under actual production conditions. All that is purely theoretical or extraneous is eliminated.

This training on the apprentice system has reached its highest development in Canada, where the executive officer of the vocational work has been enthusiastic regarding its merits and has secured exceptionally successful results. The range of training possibilities is well exemplified by some selections from the list of occupations for which disabled soldiers of the Canadian forces are now being re-educated: armature winding, harness fitting, tinsmithing, saxophone playing, pneumatic tool repairing, inspection of castings, watch-making, fur work, dental mechanics, storage battery repairing, tailoring, telegraphy, meat cutting, bronze finishing, linotype or monotype operation, piano tuning, milling and assaying, bronze finishing, lense grinding, ornamental ironwork, precious stone cutting, lead glazing, photography, and so forth.

A typical school of re-education is the National Institute for War Invalids, at Saint-Maurice, near Paris. This is a combination of an orthopedic hospital and a training center. It is under the joint control of the Ministries of War and of the Interior, the former administering the medical activities, and the latter the re-educational work.

The soldier remains under charge of the War Department until medical treatment is completed, and the necessary prosthetic apparatus provided. He is then discharged from the army and passes under the jurisdiction of the Ministry of the Interior.

The military hospital, containing seven hundred beds, is equipped for all kinds of medical and surgical work.

The prosthetic division consists of five shops. In one is tested the apparatus supplied by private concerns; in the other four, orthopedic appliances and prostheses are

manufactured by workers whose services have been commandeered by the Ministry of War.

The hospital and the school operate conjointly. In many instances the trade training begins while the patient is still undergoing treatment.

The trades taught at the Institute are shoemaking, tailoring, tinsmithing, and harness-making. There is also a commercial section, which includes courses in primary instruction, in commercial bookkeeping, and drafting. Finally, there is a special department where the men are taught to operate and repair tractors, agricultural machinery, and automobiles.

The men are lodged and boarded at the Institute. The dormitories can accommodate three hundred pupils; in addition, seventy-five beds in the hospital are reserved for men under training in the workshops.

One-armed men are not, as a general rule, directed into industrial pursuits. In exceptional cases, however, former agricultural workers are taught tractor operation. Whenever suitable, men with arm injuries or amputations are given instruction in drafting or in commercial subjects.

One of the principles of the school is to make the period of apprenticeship as short as possible. Dr. Bourrillon estimates that the time required to give an adequate training is four months for a bookkeeper, six months for a tinsmith, eight months for a shoemaker or agricultural mechanic, ten months for a harness-maker, and a year for primary instruction of an illiterate or for industrial design.

The most popular workroom in the school is the shoemaking shop, the number of pupils averaging sixty. Most of the men attending this course are one-legged or legless.

Half of them are farmers who intend to return to their homes. A month's training is allowed for plain machine stitching, seaming welting, and soling. At the end of five months, the men should be able to re-sole shoes, both pegged and hand-sewed. Complete shoes are made by men of average ability after eight months.

The tailoring department was not successful. The minimum apprenticeship of one year the men considered too long, and there were but few willing to undertake it. Instruction in this trade was therefore discontinued.

In the harness-making shop, all branches of the trade are taught, though the greater part of the business is repair work. As by-products, the shop turns out small leather articles, such as pocketbooks and cigarette cases.

The metal work shop turns out fireless cookers, army canteens, and small tin articles. The men are taught sufficient of pattern work, soldering, and joining to become journeymen in the trade.

The department of farm mechanics, which include tractor operating and repairing, is considered as one of the most important, in view of the great demand for agricultural machinery expected after the war on account of the shortage of labor. A number of graduates have been placed, either on farms or as demonstrators with firms which sell agricultural equipment.

The drafting department comprises two sections, mechanical and architectural. Arm injuries predominate in this department; many of the students are one-armed. There is great variety in the former occupations of the men; alongside of five draftsmen who had lost their right arm and were learning to do left-handed work were found nine machinists, one butcher, one chair-maker, one sausage-maker, one cook, three peasants,

three cabinet-makers, two commercial clerks, one engraver, five masons, one seaman, two joiners, one meter inspector, two electricians, one moulder, one building worker, one house painter, one sculptor, three locksmiths, one stone-cutter, and one without trade.

The course in accounting shares popularity with shoemaking. The number of applications for this course is so large that it has been found necessary to confine admission to men injured in the arm and men formerly employed in commerce; the latter make thirty-six per cent. of the pupils. Among the others are found a considerable number of former peasants—about twenty per cent.—and miners, masons, lathe-workers, printers, basket-makers, laundry hands, and so on.

The pupils are free in choosing their trade; they are free also to change to another trade if the first choice has proved unsatisfactory. They may also leave school at any time they desire. Discipline has been reduced to the minimum, and every unnecessary limitation upon the freedom of the pupils has been eliminated.

The administration makes it clear, however, that the Institute is a place for work and study rather than an asylum home; it reserves the right to dismiss any man who does not work with sufficient industry to learn a trade in a reasonable time.

So long as the product of his labor cannot be disposed of, each pupil receives a wage of fifty centimes a day. When the product is sold, the man receives his part of the profit realized, one-half being paid to him in cash fortnightly and the balance deposited to his credit until discharge, when he receives his accumulated savings and sometimes, in addition, a grant in cash or a set of tools.

During the first two years of the operation of the Institute, the number of pupils admitted was 923, and the number of graduates 481. Of these, 398 were placed in employment by the Institute.

In addition to the men who are trained at the Institute, others are assigned to various re-educational schools in Paris, or are placed as apprentices in private shops. In both cases, the training is supervised by the Institute.

The Institute maintains a boarding annex in Paris for the pupils who are trained outside. If during the training the man receives sufficient wages, he may be required to pay one franc seventy centimes a day for his board. The man is not maintained at the annex if his earnings exceed four francs a day.

By taking advantage of the facilities of outside schools and workshops, the Institute is enabled to provide for the men instruction in any trade. Experience has shown, however, that the best results are obtained when the men, while receiving training, are under direct supervision of the administration of the Institute and not exposed to the varied temptations and distractions of the capital city.

In Germany, one of the most important institutions is the Düsseldorf School for the wounded. It was created by the so-called Headquarters for Voluntary Relief, an organization which had been formed for war relief in general, by amalgamating the interests of the local Red Cross, the Women's Patriotic League, and the city administration.

The first step in re-educational work was the creation of a department of vocational advice for wounded soldiers under treatment in the fifty military hospitals of the city, which is a hospital center for the Rhine province. The

vocational advisers come in touch with the wounded man at the early stage of convalescence, when there is greatest danger of the onset of mental lethargy.

In February, 1915, about twenty general educational courses were started in one of the city's school buildings. Later, new and more suitable buildings were erected and equipped with machinery and tools. Technical courses training for many trades were instituted, and provision made for the maintenance of the pupils and for allowances to their families.

The various courses prepare men for employment as metal workers, engineers, telegraphers, electricians, carpenters, cabinet-makers and wood-workers, workers in the building trades, locksmiths, sculptors, stone-cutters, paper-hangers and plasterers, printers, photographers and etchers, bookbinders, cardboard and leather workers, dental mechanics, farmers, civil service employees, stenographers, and office workers. The trade courses prepare for the master-workers' examinations which can be taken at the Düsseldorf Board of Trade. Time spent at the school counts as time spent as a journeyman's apprentice. Examination fees have been waived for disabled soldiers. Also, instead of offering a pretentious sample of work as a "masterpiece," the would-be master worker simply has to prove that he can do what is required of a first-class workman in the particular trade. The Board of Trade has provided for a special tradeworkers' course in preparation for the examinations.

As a general rule, it is aimed to restore every man to his former occupation. When physical disability precludes this program, the object is to prepare him for some other position in the same line, usually for one that requires less physical but more intellectual effort. The

program of instruction includes, therefore, in addition to the practical trade courses and shop work, ample provision for theoretical training.

The courses preparing for office positions are the most popular with the disabled men, in Düsseldorf as elsewhere. An effort is made, however, to keep trade workers from turning to office work. The tendency is to reserve the clerical courses for men who formerly held minor government positions and who wish to prepare for civil service examinations, or for those who are too severely injured to perform physical labor, and especially for former traveling salesmen and sales clerks who by reason of their injuries must seek office jobs, preferably in their old line of business.

Finally there is the department of general education, which teaches civics, rhetoric and grammar, and simple manual training, preparatory to more intensive vocational work later to be undertaken. There is also provision for training the left hand of men who have lost their right hand or arm, and it has been found that a five weeks' course is sufficient to give these men a free and characteristic handwriting. In this work the one-armed pupils are taught by similarly handicapped instructors.

In the Düsseldorf school sports and games play a rôle of considerable importance—not only recreational but curative as well. By three months of swimming practice one of the pupils recovered the entire use of a paralyzed forearm.

When training is completed, the soldier is ready for useful and remunerative employment—to realize upon the values created during re-education.

CHAPTER VI

AT WORK AGAIN

THE real measure of success in putting the disabled man back on his feet is his showing on entry into regular employment. In matter of fact, the training is really the preliminary part of the placement program, inasmuch as the original choice of subject was made with reference to a definite labor demand, and the instruction largely determined by the employment requirements of the job in prospect.

The finding of jobs for men trained in skilled trades is a comparatively simple matter, and it will be found that the good trade school usually has its pupils placed before their course is completed. So with the schools of re-education, the men are often taken away prior to graduation. The heads of such schools are closely in touch with industry and, in a very informal way, keep on the lookout for good openings for their pupils.

The men trained wholly or partly in factories are usually kept on by the employer with whom they are placed. There is thus no necessity of finding them a job.

As has been pointed out, not all disabled men are disqualified from return to their former jobs, and thus many do not become candidates for re-education. As soon as hospital treatment is completed, they are ready to return to work. In the majority of instances they go back to their former job. On a questionnaire filled out by employers in one of the Canadian provinces it was asked whether former employees who were disabled at the

front could count on the jobs which they left upon enlistment. The answers were emphatically in the affirmative: "absolutely," or "surest thing you know," "you bet," and more of the same character. The patriotic motive in this case can safely be availed of, because the best placement possible is to return a man to an employer who knows him well, and to a job with which he is both satisfied and familiar.

In Australia one of the first moves by the repatriation authorities after the return of the soldier is to communicate with his last employer, stating the man's disability and asking whether his old position is open for him, and in the event that he is disqualified for that job, whether there is another into which he can be fitted. Enlistment in the Australian Commonwealth was and has remained entirely voluntary. As one inducement to joining the forces many employers promised to hold jobs open for men until their return from the front. In many cases this was regarded as almost a contractual obligation; the man went to France or Gallipoli to fight for interests in which his employer shared; the latter agreed that the enlisted man should not lose his place through following the course of duty. So keen was the feeling regarding this reciprocal responsibility that there were even discussions in Parliament as to whether employers should be required by law to make good their promises. It was pointed out, quite logically, that there was usually no written evidence of the promise; that the employer worth working for would live up to his word, and that in the case of any other the man would profit by finding another job. The authorities have, however, secured the cooperation of chambers of commerce in registering officially employers' commitments in this regard.



Business as Usual. A left arm suffices for this Italian ex-soldier to carry on his secretarial work



A Busy Workshop. By means of special appliances these French soldiers are made able to leave the ranks of the disabled

The jobs of some of the disabled men who can return to their former occupation will, however, have disappeared, due to suspension of operation, business failure, and other causes. The placement in these instances is comparatively simple, for the only necessity is to find the man a similar job.

Still other men, however, who remain handicapped economically have not had or do not take advantage of re-educational opportunities. For such every resource of skilled employment technique is called into play.

One of the most difficult tasks in the placement of disabled soldiers is to prevent their exploitation by employers who might argue that, as the man is in receipt of a regular pension from the government, he can afford to take a job at a reduced wage. If a man has been fitted competently to hold down a given position, this contention is indefensible, and is contrary to the whole theory of rehabilitation. As he should not receive wages in excess of his earning power, so his pay must not be prejudiced because he has some outside source of income. The employer must not be permitted to regard the disabled man as a source of labor which can afford to work cheap.

This tendency may be manifested not only in the original wages arrangement, but also in failure to increase wages in pace with augmented skill and productivity, the employer imagining that the handicapped man will be loath to leave a job on the earnings of which —together with his pension—he can comfortably live. When the employment authorities are satisfied that such a situation prevails, the man should be immediately recalled and placed in another job.

There are many men, however, who can obtain employment in the regular channels of industry but who, even when fully paid for the work they perform, cannot earn the standard wage. In order to assure that such men are not overpaid on the one hand, nor exploited on the other, there have been set up in several countries, advisory wages boards, which assess the earning capacity in individual cases. These boards are usually composed of an equal number of representatives of labor and capital with one disinterested party to act as chairman and are appointed by authority.

This question is regarded as of the greatest importance, of course, in the countries with minimum wage laws, and the unions have been solicitous to safeguard any invasion of the minimum wage protection which they won at so great pains. In New Zealand reduced rate permits are issued by the Returned Soldiers' Information Department, allowing a man to accept employment at less than the standard wage. In Australia the unions have stipulated that no more than one disabled man at a reduced wage to every six full-paid journeymen shall be employed in any given establishment.

The trade unionists have quite properly watched the rehabilitation activities to see that disabled soldiers were not used to break down wage standards or, half-trained in some of the skilled trades, utilized as strike-breakers. Both apprehensions had some foundation in fact in the inexperienced and blundering days when the work first began. In one city, for example, a large class of motion picture operators was trained in a short course which did not adequately prepare them for the occupation they were to follow. When the members of this class sought employment, they offered to work for less wages than the

regular operatives, and succeeded in displacing some of the latter from their jobs. This caused a strike, and all the class found work in the moving picture theatres. But their incumbency was short-lived, for short-circuits, fires, and other accidents, natural to inexperience, decided the strike and returned the old operators to the jobs. The incident showed up some possibilities which boded ill to the labor men.

Fortunately the rehabilitation workers have seen the danger of slipshod training and exploitation in employment and have done everything possible to guard against them. In most instances the definite assistance and cooperation of organized labor have been secured, and labor has been given representation in the training and employment activities.

Samuel Gompers, president of the American Federation of Labor, has made the following statement on the attitude of the trade unionists:

> Organized labor is wholeheartedly with the purpose of helping disabled soldiers and sailors to carry on as self-reliant, productive members of society. To men who have risked their lives for this Republic, we owe it s a duty to protect against dependency and the deteriorating consequences of lack of vocational training.
>
> Labor is concerned as to the rehabilitation of disabled soldiers and sailors not only for humanitarian social reasons but because of the detrimental economic consequences that would result from failure to return these men as resourceful, able members of society, restored in purpose and in skill.
>
> Labor desires to help in providing proper facilities under civilian control for the training of these men as well as to cooperate in returning them to industry, agriculture, and commerce where they can perform real service under such conditions

as will safeguard their best interests as well as those of fellow workers.

Labor fully appreciates the value of the principles of freedom involved in this war and desires to do everything within its power to assure justice to those who render service to the cause.

One of the leading labor authorities in Great Britain, G. J. Wardle, a member of Parliament, states that the Labor Party strongly favors the opening up of every possible avenue of instruction, not only to disabled men who had no particular trade before they joined the colors, but also to those already trained whose wage-earning capacity can be increased by further instruction. "Subject to there being no diminution in the standard of living, or possibility of the disabled man being used to defeat the legitimate objects which the trade unions have in view" there is not only sympathy with the cause, but a very definite desire to "assist the disabled man in every possible way to secure employment on remunerative work."

The unions acknowledge a very definite responsibility to their own members who return disabled from the front, and have promised to do everything in their power to replace them in the industry or arrange for their re-education. The typographical union in Toronto has paid for the training of some of its own disabled members, formerly hand compositors, as typesetting machine operators. In France some *syndicats* or unions have organized schools of re-education.

For the more helpless to whom is not possible employment in factories or mercantile establishments either at a reduced or standard wage, there is possible work either in a special subsidized workshop or at home. In the special shop the work in general and certain operations

in particular can be adapted to the limitations of the handicapped workers. If the capital expense and overhead are publicly or philanthropically defrayed, such an institution can, from the proceeds of its product, pay for wages and materials.

An example of this type of organization is the Incorporated Soldiers and Sailors Help Society which came into being in England at the close of the South African war to provide employment for disabled men. Its work was greatly enlarged in consequence of the European war, and a series of "Lord Roberts Workshops" established in various British cities. The sale of product is based largely upon considerations as to source and manner of manufacture.

Such an organization is most necessary and helpful; it is highly important, however, that men be admitted to it only as a last resort after every possibility of fitting for employment in regular channels has failed. The man who can be put to work under normal conditions should not be segregated with disabled men exclusively.

The soldier disabled too seriously even for work in a special shop or factory should be returned to his own home if he has family or relatives prepared to take care of him, rather than sent to a home for incurables, to live out his life amidst a colony of unfortunates. If possible he should be provided with work which will keep him busy and provide some modest financial return, which will prove to the shut-in a great incentive and satisfaction.

The case of the shut-in child or adult who has no work to occupy the hours of his long days is indeed hopeless. A worker in a New York City organization that is interested in the welfare of the crippled shut-in

child and adult tells of the case of a man sixty years old who was hit by a truck and suffered the amputation of both legs in consequence. His lot appeared desperate until a paper novelty company provided work for him that he could do at home. The first week the man earned three dollars—a fortune it seemed to him, for he had given up all hope of ever being a productive worker again. With ambition rekindled, he built a workbench for himself, and was able to do considerable work at glueing and pasting and increased his earning capacity little by little. He took especial pride in the fact that he could purchase sweets for his wife out of his earnings.

Some fairly satisfactory forms of home work can be found if pains are taken in their selection, and there is some effort to secure the work from manufacturers. With a little simple training of the workers it may be possible to induce the sending out of work not ordinarily so handled. There is necessary, of course, organization to obtain the work, transport it to the worker, check the quality of the workmanship, return the product to the manufacturer, bargain for rates of pay, and effect financial settlement.

Some of the most successful subjects of home work already found in very limited civilian experience in seeking occupation for cripples of both sexes are toy painting and finishing, powder puff making, glove manufacturing and trimming, preparation of paint and varnish samples, tag and label stringing, paper novelty work, brush-making, and apron stitching and finishing. It is likely that many more satisfactory can be discovered.

Many a disabled soldier whose thoughts never turned to a life in the open may be tempted, by the inducements held out by his government, to settle on the land. A

free homestead, a generous loan of money on easy payments, a set of implements for his new occupation—these offers may open new vistas to the ex-soldier whose work, before the war, kept him in the factory or in the office.

Thus, in France, a law was recently passed providing that disabled soldiers may be granted loans up to ten thousand francs, at an interest charge of one per cent. for the acquisition or improvement of small holdings.

In England, it is planned to settle returned soldiers, in general, in large colonies of small holdings, to be created by the state. As an experiment of the practicability of this scheme, a Small Holding Colonies Act, passed in 1916, empowered the Board of Agriculture to acquire in England and Wales up to 6,000 acres of land, for the purpose of providing experimental small holding colonies. Scottish-American societies have established several garden settlements for men maimed in the war.

Plans are also being made for an extensive settlement of returned British soldiers in the oversea dominions. To ascertain what facilities the dominions were prepared to offer in this regard, Sir Rider Haggard undertook in 1916, on behalf of the Royal Colonial Institute, a journey throughout the dominions. In most of them the governments declared their readiness to give the British soldiers the same facilities as regards settlement on land as the soldiers of their own military forces.

The Canadian Soldier Settlement Act, passed last year, establishes a soldiers' settlement board which may recommend to the Minister of the Interior reservation of dominion crown lands. The minister may grant to discharged soldiers or sailors of Canada, the United

Kingdom, or any self-governing dominion free entry of not over 160 acres of this reserved land. An order-in-council has reserved for the settlement of returned soldiers all vacant and available dominion lands within fifteen miles on either side of railways in the districts where sufficient land is available for settlement on a large scale. The board may also grant loans not exceeding $2,500 to the settlers for the acquisition or improvement of land, the payment of incumbrances, erection of farm buildings, etc. The loans shall be at five per cent., and the principal shall be repaid in twenty annual instalments. Payment of the first two instalments may be deferred by the board. The loan is to be expended under the supervision of the board; it is granted in the form of warrants for expenditures, which are honored by the banks as checks. The board is authorized also to provide for the training of returned soldiers on farms, for the creation of agricultural training stations, for the appointment of instructors and inspectors, and for training in domestic and household science for the settlers' wives.

The Canadian Pacific Railway Company has also worked out a scheme for the settlement of returned soldiers on the lands which it owns in the western provinces of Canada. The settlement may be either on "improved farms" in colonies selected by the company, or under an "assisted colonization" system, where the settler selects his own land from any of the company's unsold land. The cost is to be repaid in twenty instalments, with interest at five per cent.

In Australia the conference of the premiers of the several states in January, 1917, adopted a general plan which aims at settling on land 40,000 returned soldiers and sailors, Australian and British. The scheme is based

upon the cooperation of the commonwealth and the states; the latter are to supply the land, since the crown lands are owned by the several states, and the former is to provide the necessary funds. The Federal government promised to raise £20,000,000 by loan, to be devoted to land settlement. Out of the Federal Fund, an advance of £500 for improvements may be made to the settler, on very easy repayment terms, the first annual instalment being of three and one-half per cent. only. The several states have enacted legislation to help the settlement of returned soldiers. New South Wales, which has over two million acres available, transfers the land to the soldiers for an annual five per cent. interest charge with one per cent. for amortization; the total charge will be redeemed in thirty-eight years. The state may also advance to the settler £500, reserving the right to supervise the expenditures, and provides for him also educational and advisory aid. The state of Queensland has reserved all public lands for returned soldiers; there will be no rent charge for several years; then for twelve years the rent will be one and one-half per cent. of the capital value; later the rent charge will be fixed by rent-courts. Loans may be granted up to £500, at an initial rate of three and one-half per cent., gradually increasing to five per cent.; the loans are repayable in forty years. Other states, which have no public lands of sufficient fertility available must necessarily purchase land for soldier settlement. Thus in Tasmania the government purchases large estates and divides them into small holdings; the money advanced by the commonwealth is used for improvements. The state government may also provide the settler with live stock to the value of £150 and with advances in cash up to £500 for build-

ings. All the sums expended are repaid in small annual instalments.

In New Zealand, the Governor may from time to time reserve any area of crown land for the settlement of discharged soldiers. The holdings may be leased or sold to the applicants on terms decided upon by the Land Board; upon the recommendation of the latter, the Minister of Lands may also grant loans to the settlers.

In Germany the periodical pension payments may be commuted to a lump payment to enable the disabled soldier to settle on the land and undertake farming. In Prussia, where the government has been active for twenty-five or thirty years in promoting the creation of small holdings, the disabled soldier can take advantage of the old legislation regarding the so-called "rent-fee holdings"; these are farms transferred to the settler, with the help of the state annuity-banks, against an annual rent charge redeemable in about sixty years. To help the settlement of disabled soldiers, similar legislation has been enacted during the war in some other German states, as in Bavaria and in the Duchy of Brunswick.

In the United States the Secretary of the Interior is planning similar provision. As most of the desirable public lands have already been taken up, it is proposed to reclaim for soldier settlement territory which is now of no value, but which can be made fertile and productive.

Historically, one of the most lucrative fields for the employment of the ex-soldier has been the public service, either by political appointment or under civil service control. After the Civil War one of the greatest handicaps to the efficiency of national departments was the "veteran preference" legislatively enjoined, and many discharged soldiers received jobs for which they were

not capable. Taking men into jobs on this basis is just another form of charity, and as this is now being discouraged on the part of private employers, so should it be reprehended on the part of the state.

The civil service authorities should be asked, not to burden their list of appointments with men unfitted to the jobs in which they are placed, but merely to revise some of their rulings so as not to discriminate against the disabled as regards positions for which they are qualified. They may properly give preference to an ex-soldier when all other things *are absolutely equal*—but not otherwise. This is the fairest course toward the disabled applicants themselves.

Many civil service commissions have, in the past, refused to permit crippled men to sit for any examinations, even when their disability would be no handicap whatever in the position sought. The one-legged but expert electrician has been barred from employment in the alarm division of the fire department; the one-armed cost accountant has been excluded from candidacy for an inside clerical job. Even in the national crisis of war it has been impossible for one highly skilled wireless operator, with a leg amputated, to gain employment in government service. If the authorities preach to individual employers an end of arbitrary and unjust discrimination against the disabled, the change in practice should begin at home.

In France certain suitable posts in the government service or in enterprises benefiting by concessions from the state have been reserved for disabled soldiers. In Canada the returned man has preference in civil service appointments, and a great many of the re-educational classes prepare men for jobs in the revenue and postal

departments, so that the men may go to their work with preparation adequate to ensure success.

After a disabled man has been placed in employment he should be followed up to see that the new relation is working out happily. The friendly visitor should interview both parties at interest: the employer to see in what ways, if any, the worker is not giving satisfaction; and the employee to ascertain whether he considers he is being treated unfairly or not being given the best opportunity to make good. In the majority of instances the difficulties are not fundamental and may often be cleared up by a helpful third party, where the will to make the enterprise succeed is present on both sides.

After disablement the first employment is a new experience under strange conditions, and troubles either real or imaginary are liable to arise. Those of real substance, such as unsuitability of an artificial limb, the lack of technical preparation for a certain process the worker is called on to perform, the misunderstanding on the part of a department head of the scope of work for which the man was employed, may be remedied in the appropriate manner. Those having their existence only in imagination are more difficult of adjustment. The deaf employee is sensitive and, not being able to hear the conversation of his fellow-workmen, becomes convinced they are criticizing and scheming against him. The blind man presents his perfected product to the taciturn foreman and interprets his silence or ambiguous grunt as dissatisfaction. In both these instances exactly the opposite situation may prevail, but it may require considerable tact in the demonstration.

And lastly, where the job offers no fair remuneration for the present nor prospect for the future, or, from the

man's point of view, is for other reason definitely unsatisfactory, the employment should be terminated at the advice of the visitor, and another placement made. An employment authority will often send men to jobs which are known not to be ideal, but the position should be regarded as temporary only and the worker recalled when better employment is available. On the other hand, where an employer—often with motives of goodwill and helpfulness—has hired a disabled man on representation that he can competently meet the requirements of the job, and it is found that the worker is failing to do so, or is careless, irresponsible, and not trying to do his duty, then he should be removed on the initiative of the same organization as made the placement, thus relieving the employer of the embarrassment of discharging a physically handicapped man. The general employment interest of the disabled will best be served by such a policy. This is particularly being recognized in relation to the blind, present placement plans providing for recall of the worker who is misplaced or failing to succeed. The average employer shrinks from discharging a blind man and may, even in spite of incompetence, carry him on the payroll for several years. But after one experience of this kind he will take good care indeed that he is not again saddled with a similar embarrassment in the person of another blind employee.

Quite the antithesis of the policy of refitting the disabled man for return to the regular fields of industry to find employment side by side with normal workers—and with the disability assuming progressively a rôle of less and less importance—is a proposal recently made in England to provide for the partially disabled through the erection of a system of industrial villages wherein

should be housed and employed the returning physically handicapped soldiers. It being assumed that re-education has been provided for, there is proposed the creation of an exceptionally favorable environment so that the results of training "may be increased a hundredfold," for it is argued that if the crippled men "are compelled to carry on their work amid the evil conditions so often existing in our towns however well-housed in home and workshop, instead of in the villages which it is our desire and aim to see placed at the disposal of employers of wounded soldiers, as well as those who work at independent crafts, we shall certainly have failed, as a nation and individually, in our whole duty towards them." The proposal is to build up model villages, either now in their entirety or built around some existing nucleus. The financial suggestion is that the capital expenditure be financed at government or private expense, but that beyond this point the disabled men should pay their own way. It is expected to provide a central business organization which would arrange for community purchase of supplies and marketing of products.

Such a village, from the ideal point of view, would assuredly be a charming place in which to live. But whether the plan would work is open to some question. The best test of all proposals for disabled men is to consider whether they would work for normal men. On this criterion, it seems unlikely that a given group of men, mostly resident in large cities, could be persuaded in spite of apparent inducements to leave their present homes and social ties, and move with their families to a new locality. Certainly they would not do so unless satisfactory employment were certain indeed.

It is proposed that the village be planned and built around a dominant industry. By showing of actual experience no industry could be found which would suit any considerable proportion of disabled soldiers. The principles of their re-education call for training in the same line as that in which they were previously employed or in a line very closely related. The number of training subjects is constantly on the increase. For example, in Canada, disabled men are being taught ninety-seven different vocations. No village would supply employment of such wide range.

It is on the social considerations involved, however, that must be taken most definite issue. The plan calls for the segregation of a special class, a policy which has been rejected in modern work of social character. In the statement of the plan this criticism is anticipated, and it is argued that disabled men will be happier in their own company than when struggling under real or imaginary odds against able-bodied competitors. The answer is that true happiness comes with replacement in normal employment, working side by side on an even footing with normal operatives. The aim of re-education is to turn out the soldier as a skilled worker in a job *at which his disability is no handicap*. Will the one-legged man be better off in a colony of cripples or—after thorough training as a telegrapher, monotype operator, or mechanical draftsman—in employment secured through standard channels?

CHAPTER VII

HELP OR HINDRANCE

THOUGH the re-educational provision may be excellent, and though the will and spirit of the men under training may be of the best, yet the complete success of a program of rehabilitation will depend upon whether the attitude of the public acts as a help or a hindrance—upon whether the influence on the individual ex-soldier of his family, his employer, and the community at large is constructive or demoralizing.

What, then, is the public duty toward the disabled soldier? For it is certain that the requirements need only to be understood to be fulfilled.

The first responsibility on the part of the family of the injured man is to learn the meaning of disability, and see the hopeful rather than the depressing aspect. Just recently, in the suburb of a large Pennsylvania city, a woman in a swoon was found on the steps of the local postoffice. She had just opened a letter from her son at the front which told of a gunshot injury necessitating amputation of his left arm below the elbow. Immediately there rose before her eyes the terrifying prospect of a life of idleness and possible pauperism. One can imagine what her next letter would be like: saying she knows what the amputation means and sympathizes most tenderly on account of what must be faced in the future. If it were only a leg, it would not be so bad for then he might be able to take care of himself and get some kind of a job, but with an arm off he could not

expect to do that. But she and father have saved up some, and with uncle's help they will take care of him till the end of his days. Picture the influence of this message in comparison with another which might be sent in the light of a fuller understanding of what is possible: "I have just heard of your arm amputation and sympathize most lovingly in your loss. But I know you will not lose your courage, even at this sacrifice for your country. Even now, the national authorities are making plans to make up so far as possible for such losses, as you doubtless already well know. One-armed men can be trained for skilled jobs, especially men with native ability such as yours, and the training is already under way in the city near us. The employers also here are becoming tremendously interested in the subject, are finding jobs specially suited to men who have lost arms or legs, and have promised these jobs to the fellows who return from the front disabled. And you can count on our standing behind you at every step and helping in every way we can. This is really a fine future to look ahead to, for if you make good here at home with your handicap of honor, you and we will have true reason to be proud. And of course you will succeed if you go at this obstacle with the same spirit and nerve as have gone toward your work in the army. Your mother will look forward to seeing you return home, wearing the uniform of Uncle Sam and flying the colors of a soldier who can't be beaten."

It is greatly to be desired that the families of men going to the front should know of the possibilities of re-education and re-employment and of the provision being made for the disabled, for it would mitigate not only a great deal of mental suffering over actual injuries

but over prospective disabilities as well. It is well known that the greatest fear regarding service in the trenches is not the loss of life but the prospect of returning crippled. As one writer has well put it: "To die for one's country; if one could only be sure of dying!" In coming down in the elevator of a large New York department store recently, the day following the publication in its pictorial section by a great daily newspaper of the photograph of the first American amputation cases in France, the following remark was overheard: "Did you see those horrible pictures in the paper yesterday? I do hope that Jack will not come home that way; I would rather he be killed." Yet the picture showed only foot amputations, and to one familiar with cripples and their potential accomplishments such a disability seems a real inconvenience but nothing more. The woman quoted was suffering unduly in her apprehension.

It is not here intended to minimize the seriousness of the total disabilities, but these occur in but one case in a hundred thousand. The point is that many injuries that might be regarded as terrible under unintelligent handling in the past no longer remain so.

The second responsibility of the family is to understand the importance to the disabled soldier of the proffered training for self-support, and to encourage him in every possible way to undertake it. The family must do more than avoid opposition to the soldier's plan for re-education; they must do more than give it lukewarm assent—they must get behind it with every influence at their command.

Failure to have the family understand and support the program for the future of the disabled man may have disastrous results. In France the mother occupies

an unusual place of authority in the family economy. A son may grow up to be twenty, thirty, or forty years old, but mother is still a chief to whom obedience is unquestionably paid. In dealing with the *poilu*, therefore, one must count on his maternal parent as well. At one French center of hospital care and re-education it was found that as a man would approach the point of his medical recovery and approach the time of entry on vocational training, his mother was liable to descend upon the hospital office, beat her umbrella on the table, inquire why they were keeping her son so long away from home, and demand his immediate discharge in order that she might take him away "to care for the poor crippled boy for the rest of his life." In vain were explanations and arguments regarding the efficacy of further treatment and training. She had come there determined to take her son away, and the scene would continue until her end was accomplished. And in most instances there was nothing to do but accede to the mother's demand.

But a better way was found of dealing with the families of men deemed likely to benefit by re-education. Under this procedure, when the soldier was nearing the end of his hospital care, the director of the institution would summon the mother to come in and advise regarding her son's future. She would then be addressed something in this wise: "Your son's medical treatment will in another week or two be practically complete, and we thought you might like to know so that, if you desired, you could make plans to take him home. But you know he is permanently disabled and will not be able to go back to his old job of telegraph lineman. We know that you expect to care for him, but he will outlive

you, and later, since the government pension is small indeed, he will be reduced to a miserable situation. You remember the cripples from the war of 1870, how they begged or sold trinkets about the streets—and you would not want your son to be in that fix. Luckily, however, he will not have to be for we have something else to suggest. Across the street is a school where the men are taught various skilled trades. If your son cares to stay for five or six months, and you approve, we will teach him to be a telegrapher and he can go back to his home town and get a good job with the government telegraphs. As a skilled worker still he will be doubly respected in the community, he will be a burden on no one, his future will be assured, and you will be very, very proud of him. What do you think wise under the circumstances?"

The whole situation is changed. Mother greets her boy with: "Son, have you heard what they are going to do for you?" And as the son has already been talked to regarding the program, the joint decision is assured.

This illustrates the difference between a family for or a family against the proposal of re-education.

The third duty of the family is to stand behind the man during his course of training and try in every way to encourage rather than dishearten him. Letters from home which recite all the troubles of life and none of the joys will not help the enterprise. The family reaction should rather be: "Stick to it; we are getting along all right and want to see you finish the job up right, now that you are at it." In other words, it is necessary to maintain the morale of the family in the same way as when the man is at the front. This is largely contributed to by home visitors such as those

of the Canadian Patriotic Fund or the American Red Cross.

The fourth family responsibility toward the disabled man is to make the home influence as sensible and as truly helpful as possible after his return from hospital or school. The first and very natural impulse when son or husband comes home crippled or blind is to pet him and wait on him hand and foot. Yet the best interests of the family as well as of the man himself demand his being encouraged to do for himself everything he can, with the aim of stimulating that self-dependence which has been the object of his whole course of training. Within the limits imposed by affection the family should endeavor to carry along the spirit of that training.

In the readjustment of the crippled soldier to civilian life the employer has a very definite responsibility. But this duty is not entirely obvious. It is, on the contrary, almost diametrically opposite to what one might superficially infer it to be. The duty is not to "take care of," from patriotic motives, a given number of disabled men, finding for them any odd jobs which are available, and putting the ex-soldiers in them without much regard to whether they can earn the wages paid or not.

Yet this method is all too common. A local committee of employers will deliberate about as follows: "Here are a dozen crippled soldiers for whom we must find jobs. Jones, you have a large factory; you should be able to take care of six of them. Brown, can you not find places for four of them in your warehouse? And Smith, you ought to place at least a couple in your store."

Such a procedure cannot have other than pernicious results. In the first years of war the spirit of patriotism

runs high, but experience has shown that men placed on this basis alone find themselves out of a job after the war has been over several years, or in fact, after it has been in progress for a considerable period of time.

A second weakness in this method is that a man who is patronized by giving him a charity job, comes to expect as a right such semi-gratuitous support. Such a situation breaks down rather than builds up character, and makes the man progressively a weaker rather than a stronger member of the community.

The third difficulty is that such a system does not take into account the man's future. Casual placement means employment either in a make-shift job as watchman or elevator operator—such as we should certainly not offer our disabled men except as a last resort—or in a job beyond the man, one in which, on the cold-blooded considerations of product and wages, he cannot hold his own. Jobs of the first type have for the worker a future of monotony and discouragement. Jobs of the second type are frequently disastrous, for in them a man, instead of becoming steadily more competent and building up confidence in himself, stands still as regards improvement and loses confidence every day. When he is dropped or goes to some other employment, the job will have had for him no permanent benefit.

Twelve men sent to twelve jobs may all be seriously misplaced, while the same twelve placed with thought and wisdom and differently assigned to the same twelve jobs may be ideally located. If normal workers require expert and careful placement, crippled candidates for employment require it even more.

The positive desideratum is to find for the disabled man a constructive job which he can hold on the basis

of competence alone. In such a job he can be self-respecting, be happy, and look forward to a future. This is a duty not so easy of execution as telling a superintendent to take care of four men, but there is infinitely more satisfaction to the employer in the results, and infinitely greater advantage to the employee. And it is entirely practical, even in dealing with seriously disabled men.

Thousands of cripples are now holding important jobs in the industrial world. But they are men of exceptional character and initiative and have, in general, made their way in spite of employers rather than because of them. Too many employers are ready to give the cripple alms, but not willing to expend the thought necessary to place him in a suitable job. This attitude has helped to make many cripples dependent. With new responsibilities to the disabled soldier, the point of view must certainly be changed. What some cripples have done, other cripples can do—if only given an even chance.

This, then, constitutes the charge of patriotic duty upon the employer:

To study the jobs under his jurisdiction to determine what ones might be satisfactorily held by cripples. To give the cripples preference for these jobs. To consider thoughtfully the applications of disabled men for employment, bearing in mind the importance of utilizing to as great an extent as possible labor which would otherwise be unproductive. To do the returned soldier the honor of offering him real employment, rather than proffering him the ignominy of a charity job.

The responsibility to the disabled soldier on the part of the community at large is much more complex, since the contact exists at a multitude of points and is at

none highly intimate. The first reaction of the public to the returning man is hero-worship of the most empty type—described coldly, it usually consists in making a fool of the man and entertaining him in inappropriate and hurtful ways.

One form of this is society lionization—and for but the proverbial six days indeed. To a large Canadian city there returned a disabled soldier after two years' absence at the front. His wife and children had been looking forward expectantly to having him with them, but after his arrival saw but little of the head of the house. As a national holiday was approaching, they were counting on his accompanying them to the park, and had exacted a tentative promise that he would do so. But as the morning arrived and mother was dressing the children to start, father made no move to get ready. Almost tearfully mother asked if he was not going with them. "Oh, no," he answered, "I am going for an automobile ride this morning and this afternoon to a sing-song at the ———— [naming a fashionable hotel]." This was the way in which the community was showing kindness to the returned soldier and helping to put him back on his feet!

The man on the street thinks the greatest service to the disabled fighter, particularly when he is discharged from the army and no longer under the partial protection of the khaki, to consist in buying him at the corner saloon as many drinks as he can hold. From one small American city a social worker reported inability to distinguish as to whether certain discharged men were suffering from shell shock or intoxication, so hearty was the hospitality of the citizens. Such "kindness" requires no comment. Fortunately the war-time measure regard-

ing the liquor trade will soon make this impossible, and will guard the ex-soldier from one pitfall. It may be noted in passing that this will be a boon to the returned men in more ways than one. In Canada at a time when most of the provinces had prohibition and one or two others limited license, the placement of disabled men in employment was many times simpler in the dry territory than the wet. In the latter many men lost jobs again and again by reason of intoxication, not only injuring themselves, but weakening the standing of their fellows as well in the eyes of the employers.

Finally, there is the great general public prejudice against the disabled, the incredulity as to possible usefulness, the apparent will to pauperize, and the reluctance through usual channels of opportunity to give the handicapped man a chance. Successful crippled and blind men unanimously testify that the handicap of public opinion is a greater obstacle than amputation of limb or loss of sight. And this unenlightened attitude is manifest in every social relation of the disabled—with family, with employer, with the community as a whole.

It becomes clear, therefore, that a necessary feature of any program for restoring the disabled soldier to self-respect and self-support is a campaign of public education to convert the general attitude toward the crippled and handicapped.

This need was recognized most clearly among our enemies by Germany and among our allies by Canada. There was signal failure to appreciate the value of public education in France, Great Britain, and Italy. There is no need of it yet in Belgium as all the disabled men are retained in the army and provided not only with

training but with employment as well, and there is no family problem as the men cannot return home.

Within a few months of the opening of the war, the secretary of the German national federation for the aid of cripples made a tour of the leading cities of the Fatherland speaking to meetings of public officials, social workers, and the like, with the aim of disseminating intelligence regarding modern principles and methods of dealing with the disabled. The same authority prepared several pamphlets of popular character which were distributed in editions of over a hundred thousand. There was in existence at the outbreak of the war an excellent monthly journal on work for cripples, and this devoted its columns to the subject of provision for the war disabled. Some other special publications in the same field immediately sprang up. One of these has the interesting title of "From War to Industry."

There has been issued under the title of "The Will Prevails" a volume of biographies of cripples who have overcome their handicaps—from Tamburlaine down to men disabled in the present war. The book is intended for circulation in hospitals and for general reading. Exhibitions illustrating in a practical way the possibilities of the war cripple constitute another vehicle of public education, and have been held in the leading centers of the empire. Moving pictures and lantern slides are also being utilized for propaganda to stimulate interest on the part of the people and to arouse ambition and courage on the part of the disabled themselves.

In Canada a real and very intelligent effort has been made to acquaint the people with the aim and practice of re-education. A well-known poster, printed in red and black, entitled "What Every Disabled Soldier

Should Know" is widely in evidence throughout the Dominion. It is really addressed as much to the public as to the returned soldier. The text of the poster is as follows:

That there is no such word as "impossible" in his dictionary.

That his natural ambition to earn a good living can be fulfilled.

That he can either get rid of his disability or acquire a new ability to offset it.

That the whole object of doctors, nurses, and instructors is to help him in doing that very thing.

That he must help them to help him.

That he will have the most careful and effectual treatment known to science.

That interesting and useful occupations form a most valuable part of the treatment in the convalescent homes and sanatoria.

That if he cannot carry out his first duty by rejoining his comrades at the front, and if there is no light duty for him with the Canadian forces overseas, he is taken home to Canada, as soon as his condition and the shipping facilities make this possible.

That his strength and earning capacity will be restored there to the highest degree possible, through the Invalided Soldiers' Commission.

That if he requires an artificial limb or kindred appliance it will be supplied free.

That every man disabled by service will receive a pension or gratuity in proportion to his disability.

That if his disability prevents him from returning to his old work he will receive free training for a new occupation.

That full consideration is given to his own capacity and desires when a new occupation has to be chosen.

That his own will-power and determination will enable him to succeed, both in the training and in the occupation afterwards.

That his maintenance and that of his family will be paid for during the training he may receive after discharge, and for a month longer.

That neither his treatment nor his training will cost him a cent.

That his home Province has a special commission to assist him in finding employment on discharge.

That hundreds of towns and villages have committees, associations, and clubs, to welcome him on arrival, and to help in securing a position for him.

That the Dominion and Provincial governments, the municipal authorities, and all sorts of employers, give the returned soldier preference in filling vacant positions.

That the returned soldier wishing to take up land and farm it, will be helped to do so, under Federal and other settlement schemes.

That the Invalided Soldiers' Commission exists to carry out his restoration and training in Canada.

That the Board of Pension Commissioners exists to distribute the pensions provided by his country for him and his dependents.

That the Invalided Soldiers' Commission and the Board of Pensions Commissioners are in the position of trustees, appointed for his benefit, and representing the whole people of Canada,

That, therefore, he should write direct to the commission or the board if he needs advice or help.

Canadians are unanimously resolved that every returned soldier shall have a full opportunity to succeed. When that opportunity is put within his reach, his success will depend on his own good sense in seizing and using it.

Another poster of pictorial character shows a one-armed man, fitted with an artificial appliance, at work on a drill press.

The daily press has been supplied with material descriptive of the success of men who have completed training and made good. Some stories have carried

with them a little preachment as to sound attitude toward the disabled soldiers. One concludes with this statement: "Every man doing steady work suited to his capacity is a gain to himself and his country. Every man left idle, or performing some trifling task beneath his capacity, or trying to do work he is unfit for, is wasted. And Canada cannot afford to waste a man."

A remarkable moving picture film in ten reels has been prepared by the government authorities to illustrate the progress of the disabled soldier after his return from overseas. It shows reception at the debarkation depot, transportation in a hospital train, various forms of treatment at military hospitals, recreation, vocational training, and, finally, re-employment in industry. The message of the series of reels is "that injury does not mean pauperism; that every man is given a chance to make good." Where the man does not try to help himself, however, there is shown the opposite eventuality of vagrancy. The film is for exhibition in Canadian military hospitals in England, and for showing to the public of the Dominion.

In the United States there has been as keen if not a keener realization of the fundamental importance of public education to the cause of the disabled as in any other country, and as might properly be expected actual work on such a campaign began at an early date. The Surgeon General of the Army issued in October, 1917, a clear statement of the modern policy and spirit of dealing with the disabled soldier, under the title of "The Passing of the Cripple." Later the same office made an excellent contribution to the cause in the preparation of moving picture films of five successful American cripples, who were seriously handicapped, yet had overcome their

obstacles. This series of reels was entitled "The Way Out," and was intended for showing to the general public and in hospitals overseas to men who have just met with disabling injury. The set is one item in a "cheer-up campaign," another projected feature of which is the issue of a volume of biographies of disabled Americans who have beaten their handicaps. Still another factor in this work is the issue by the Surgeon General, in co-operation with the American Red Cross of an inspiration magazine, by name "Carry On," which aims to convey to members of the Army medical corps, to Army nurses, to Red Cross home service workers, and to the public at large some conception of the new spirit in dealing with wounds, of more kinds than one, which are sustained at the front. This magazine has already a monthly circulation of over a hundred thousand.

An unofficial campaign in the interest of the disabled was early initiated by the Red Cross Institute for Crippled and Disabled Men. One of the most familiar items in this campaign was a small folder of which over seven million copies were distributed, largely through the courtesy of telephone, gas, electric, and other public service corporations. It was entitled "Your Duty to the War Cripple" and its text—which epitomizes the gospel preached in the campaign—read as follows:

When the crippled soldier returns from the front, the government will provide for him, in addition to medical care, special training for self-support.

But whether this will really put him back on his feet depends on what the public does to help or hinder, on whether the community morally backs up the national program to put the disabled soldier beyond the need of charity.

In the past, the attitude of the public has been a greater handicap to the cripple than his physical disability. People

have assumed him to be helpless, and have, only too often, persuaded him to become so.

For the disabled soldier there has been "hero-worship"; for the civilian cripple there has been a futile kind of sympathy. Both do a man more harm than good.

All the cripple needs is the kind of job he is fitted for, and training in preparation for it. There are hundreds of seriously crippled men now holding down jobs of importance. Other cripples can do likewise, if given the chance.

In the light of results already attained abroad in the training of disabled soldiers, the complete elimination of the dependent cripple has become a constructive and inspiring possibility.

Idleness is the great calamity. Your service to the crippled man, therefore, is to find for him a good busy job, and encourage him to tackle it.

Demand of the cripple that he get back in the work of the world, and you will find him only too ready to do so.

For the cripple who is occupied is, in truth, no longer handicapped.

Can the crippled soldier—or the industrial cripple as well—count on you as a true and sensible friend?

The assistance of chambers of commerce and manufacturers' associations was enlisted to secure transmittal to their members, with a special note of endorsement by the organization, of a circular calling to the attention of employers their responsibility to the disabled soldier. Over two hundred thousand employers were reached direct in this manner, and the statement was reprinted in scores of trade journals.

A speaker's bureau was organized, a film and picture service instituted, and the daily press and magazines were supplied with informative articles on the work being accomplished abroad in the reconstruction of crippled men. One of the most interesting features of the work

was the preparation for individual trade journals of articles on re-education in the particular trade covered by each journal or on employment opportunities for the disabled in that trade. This material proved of very direct interest to both editors and readers of the journals.

Another feature of the campaign was the issue of a booklet in ten foreign languages: Yiddish, French, Italian, German, Hungarian, Polish, Greek, Spanish, Danish, and Swedish. These were distributed to pastors of foreign language speaking congregations, and to physicians and social workers in the foreign communities. The text of the booklets was also reprinted by almost every foreign language newspaper in the country.

The work of public education in the interest of the cripple has just begun. It must be continued until the "man on the street" is thoroughly familiar with his responsibilities to the disabled.

CHAPTER VIII

HORS DE COMBAT

THE disabilities of modern warfare are varied indeed. While the soldier with a leg off has represented in literature and illustration the war disabled, this representation is statistically far from accurate, and many other classes of handicap incurred in military service have numerically exceeded the amputated. Yet to the public at large the one-legged hero will doubtless continue to typify the toll of warfare in disability.

By criteria of method and manner of treatment and training, certain groups of the disabled are set aside into classes from among the multitudinous list of causes for which men are discharged from the army. Into such clear classifications fall the blinded, the deafened, the shell shocked and other mental cases, and the tuberculous. These groups will be dealt with in succeeding chapters. Excepting cases of facial disfigurement, which is a subject in itself, there remain to be considered a wide variety of cases which can best be described as crippled, allowing for a liberal interpretation of that term.

This class comprises amputations, paralyses, severe rheumatism, limitation of movement in joints due to gunshot injuries, general debility due to long-continued suppuration, and a long list of other difficulties. Although medical treatment may vary, all may be considered to require the same type training provision and employment.

It should particularly be noted that many of the most serious disabilities from the point of view of employment are not at first glance apparent. For example, a tour may be made of some Canadian centers of re-education without observing in the classes more than one or two obvious cripples.

It is the crippled soldiers who will be discussed in the present chapter. For convenience the class will be still further sub-divided into amputation cases and other disabilities.

The first requirement of the amputation case is an artificial limb. It is worthy of note that there has been a complete revolution in the surgical methods in leg amputations. No longer is a crippled man permitted to drag himself around for months on crutches, learning how to walk on his armpits and forgetting how to walk with his legs. One reason for this practice in the past was that it was impossible to fit the artificial limb until the stump had had a chance to shrink to something resembling its final form. But in the modern anxiety of the surgeons to get the man back on his legs, they do not wait for fitting of the permanent limb, but put on him at once, a few weeks after amputation, a temporary peg leg made of splints and plaster, or papier-mâché, or of some other similar material. The soldier then leaves his bed and takes his first steps about the hospital. An appliance of the sort meets in a most satisfactory way all the requirements of transport from overseas.

A peg leg of any kind, however, if worn for some length of time gets a man in a bad habit of walking, for the reason that it must be swung outward in a semi-circular motion to bring the foot of the peg from the end of one step to the beginning of the next. This process is known



Learning to Walk for the Second Time. At Naples, Italy, crippled soldiers are provided with artificial limbs and taught to use them



A "Working Arm" in lieu of Nature's Own. A variety of tools can be fitted into the chuck of this appliance, and the one-armed poilu is again enrolled in the army of labor

scientifically as abduction. In providing for leg amputations among men in the American Expeditionary Force, after the cases have been returned to this country, another improvement has therefore been made. Temporary limbs of hollow fiber, made with knee and ankle joints in practically the same manner as the final leg, are made up in standard units in sufficient numbers to meet the probable demand. These are fitted to the men after they have worn the peg leg for a short time, and the fitting can be changed as the stump alters in shape or size. This provisional leg is expected to last from six months to a year and to serve satisfactorily, therefore, until the permanent limb can be fitted with the best results.

France and Great Britain were caught unprepared by the demand for limbs, as their supply had been before the war largely imported from Germany. They have had to make strenuous efforts to meet their needs.

Most of the countries purchase their limbs from private manufacturers. At Roehampton, the great limb-fitting center in England, individual manufacturers have been permitted to erect shops on the grounds of the hospital. Canada led the way in the establishment of a government limb factory, though many of the parts used were, during the first year or two of operation, purchased from outside concerns. More recently Australia has established an artificial limb shop, which is now operated by the Minister of Defense, but is to be handed over at the conclusion of the war to the Repatriation Ministry. In the United States the purchase of permanent artificial limbs, which will be furnished free of charge to crippled soldiers, is in the hands of the Bureau of War Risk Insurance.

The most popular type of limb being made abroad is what is known as the "American leg." This is made up from units of willow, first shaped for outside contour and then hollowed out in similar contour to reduce weight. The units are then covered with rawhide, varnished, and assembled with the joints, stops, and springs necessary to their proper functioning.

In the field of artificial arms an American model has again had preference, though a very satisfactory but elaborate type has recently been worked out in France. These arms permit the performance of practically all the duties of every day life.

In arms of this character movement is attained by linking up the mechanism by cables of wire or rawhide with new muscular combinations. Thus expiration of the chest may open the fingers, and movement of the opposite shoulder may operate the elbow.

A still more modern development, the invention of an Italian surgeon by name Vanghetti, is what is known as kinematic amputation. By this method of operation tendons and muscles are so arranged that attachment may be made to them, and there may thus be caused direct movement of the artificial member. Very often, however, the action of a muscle will cause a different movement from that which it was accustomed to effect under natural conditions, and it then becomes necessary to re-educate the motor reactions in order to attain ordered control. The final value of this method has not yet been determined.

One of the most interesting developments in dealing with cases of arm amputation is the fitting of industrial workers with mechanical appliances, designed to meet the requirements of their particular trades. Thus a

bench machinist will be provided with a chuck which will hold interchangeably a file, hammer, chisel, or other tools. A drill press operator will have a hook or ring which will pull down the lever of his machine. An agricultural worker will be equipped with a cylindrical grip or grips which will slip over and hold the handles of various farm tools. A glass worker will have an appliance especially suited to the demands of that calling. Such apparatus do not displace the modern artificial arm which is also furnished to the arm cripple to use in his home on evenings and Sundays. But it has been thought wise for specialized jobs to develop specialized appliances to perform them.

Especial ingenuity has been devoted in France to the design of apparatus for agricultural workers in order to assist the effort to put back on the land just as many men as possible whose experience has been in farming. Even men with both arms amputated have been refitted for this work.

There are other arm devices for general use which do not resemble arms. One is a universal hook which will perform a wide variety of tasks. Another, invented and developed by a man who is himself handicapped by double arm amputation, consists of a holder in which is a general utility hook which may be replaced by knife, fork, pen, or other tool or implement. This is one of the most practical appliances for a man with both arms off.

While many of the most eminent engineers and orthopedic surgeons of Germany were engaged in the development of working arms for industrial or agricultural employees, the best and most practical model of all was produced by a simple peasant who had lost one of his

own arms in the war. The arm is named after him the "Keller Claw."

For partial paralyses and other orthopedic difficulties not involving amputation all kinds of supports, braces, and the like, of great ingenuity and in wide variety, have been devised.

The cases of crippling disability other than amputation require little comment in a book of this character, for they are treated according to standard methods of medicine and surgery. The most interesting new development is the advance in methods of "functional re-education"as it is called—the training of injured joints, muscles, and the like back to normal movement and capacity. This treatment is now active rather than passive, that is, the patient exercises himself rather than sits quiescent with the movement induced by external force. In one set of most interesting apparatus there is a dial on every piece so that the patient can see for himself what range of movement is attained and, as it were, compete with his own record at the preceding treatment.

As regards trades suitable for cases of arm and leg amputation, there is accurately speaking no such classification possible, because the future of each man must be determined by individual considerations. A trade which might be unwise for the great majority of arm cases might in an individual instance, by reason of the man's past experience, be the best one for him to undertake. There can be made a list of trades not possible to the amputated of various types, but the converse cannot so confidently be compiled.

An approximation based on experience in re-educating arm or leg cripples can, however, be arrived at. Such is represented by a list issued by the British Ministry of

Pensions. For leg amputations, among others, it lists: bootmaking, caretaker, chauffeur, domestic service, electrical work, engineering, gateman, groom, hall porter, hospital orderly, industrial work (sundry forms), munition work, milker, packer, painter, printing, railway work (varied), tailoring, telephone attendant, telegraphy, timekeeper, and watchman. For arm amputations it lists: clerical work, gymnastic instructor, messenger, porter, railway work (sundry duties), scholastic, telephone switchboard attendant, timekeeper, watchman.

A few generalizations apply. A man with an artificial leg should not be prepared for a job which will keep him standing or walking more than one-third or one-half the time. A one-armed man, if his mental capacity permits, may most successfully be trained for a clerical or desk job.

In the actual work with cripples there is no limit on originality, for each case practically entails a new economic plan. The worker in this field will discover new principles as he proceeds. There is also no limit to the fascination of the subject, for the field is still a frontier for pioneers and the satisfaction derived from putting one helpless man after another back on his feet is very real indeed.

CHAPTER IX

OUT OF THE DARKNESS

BLINDNESS is a very serious handicap, the intensity of which cannot be minimized. This is especially the case with the loss of sight occurring in adult life as with the blinded soldier. With all his activities organized on a sighted basis, the new limitation seems crushing. Yet there is a way out of the darkness to happiness, and it is our sacred duty to help the blind veteran to find that road.

This obligation has been well stated by Eugène Brieux, who has taken a deep interest in the war blinded of France. "For some wounded soldiers our responsibility is over when their wounds are healed, but for the blind it then only begins. Blinded soldiers have been reduced to a state of disadvantage to other men; they have become again children, before whom stretches the possibility of a happy life, but who must be initiated into this new life. They have need of treatment other than physicians can give, of other aid than consolation and kindness. They need to be prepared for their new life—to be armed for the struggle upon which they are entering. It is true that they enter the struggle less enfeebled than one would think, far less than they themselves believe, but their capacities are of a different kind from what they were before, and the period of adaptation is hard." During this period, those privileged to care for the blinded soldier will need all the tact and skill at their command.

Fortunately, the number of soldiers suffering from loss of sight, total or approximately so, is comparatively

small. According to British statistics injuries to sight account for but two and eight-tenths per cent. of the disability pensions granted. In the Canadian forces up to date there have been blinded less than one hundred men.

In starting in with the blinded soldier there are two primary requirements. The first is to overcome the deep discouragement in which the man is likely to be plunged. The second is to teach the soldier to be blind —how to accomplish the little everyday tasks which make life possible and comfortable. The first of these goes with the latter, for as the man learns how to take care of himself and get about with some facility, hope begins to return. In these early stages another blind man is the best teacher, and will succeed where the sighted fail. Sometimes a fellow warrior who has himself been blinded, but has already had his start, will be most effective of all. The first blinded American sailor who returned to our training center at Baltimore was so far depressed that his case seemed hopeless. Nothing could be done with him until there was put on the job the first blinded American soldier, who had an earlier start and had already "seen the light." His companionship and encouragement turned the trick, and of course the advantage was reciprocal.

All along the course of re-education the blind can be of the greatest assistance to the sightless soldiers. They make good teachers for, when they argue that a thing can be done, it is likely to carry conviction. They know whereof they speak.

Another necessity is teaching the families to have a blind member, and be helpful to him rather than the reverse. The American program for re-educating blinded

soldiers provides for bringing the families of the men to the training school for a visit, so that they may become acquainted with and understand the methods by which the men are led to be independent. If when the man returns home the family immediately discourages his ever moving out of his chair, insists that he will stumble if he walks about the house, and brings everything to him, they will be destroying the good accomplished during his training. It has been well said that "they should not place him in a corner out of reach of all danger like a feeble old man or a child in swaddling clothes." They must rather tactfully encourage him to do more and more for himself and urge him to get up and about. They must be prepared, in a word, to continue his re-education.

Blinded soldiers must be protected during their period of training against the visits of curious but well-meaning people, whose ill-advised remarks will do more harm in a few minutes than the benefit which a teacher will impart in as many days. Several French schools have prominently displayed this notice: "To pity is not to console! Only words of hope and confidence should be spoken here."

Recreation is an important factor in the social treatment of the blinded soldier. One of the primary methods of entertainment—with instruction combined—is reading aloud to a group of men. At one of the oldest schools for the blind in Paris a daily newspaper is read from each morning, the choice of the journal being determined by vote of the auditors. Music is another means, and the blind should be encouraged to take part in group singing. Many athletic games of considerable vigor are entirely

within the reach of the blind, and almost any form of gymnastic work is practical.

For inside recreation there are playing cards with raised symbols of identification, dominoes with the dots raised instead of sunk, and sets of checkers with the black pieces square and the red pieces round.

The first educational necessity for the blinded soldier is the learning of Braille. Fortunately, in this country and Great Britain the divergences of opinion which were responsible for the existence of several different alphabets have been reconciled and there has now been adopted a standard type. Learning this the blind man will be enabled to continue his reading or study to keep posted on current developments through a monthly magazine in raised letters, and correspond with his friends. He may write himself either in embossed print or with the aid of a guide to keep the lines straight and regular, with pencil or pen. He should be encouraged to do the latter so that he may not forget how. With men who were illiterate before they became blind the matter of teaching them to read and write Braille is not so important.

In the past the blind, like the crippled, have suffered from the conception that the only occupations within their capabilities were those of basket-making, chair-caning, and other similar handicrafts. Almost no schools had attempted teaching the more highly skilled specialties. Yet the few experiments which have been attempted, and the instances where ambitious blind men have made places for themselves, show that well-paid occupations are not closed to the sightless. A few examples will show the manner in which the problem is approached.

In a large factory making an ignition and lighting system for automobiles, much expert assembly work is

performed by a man totally blind. Is this man, who does all his work by sense of touch, under any handicap in competition with his sighted colleagues? As a matter of fact, he is probably a more faithful workman because he appreciates the opportunity of his job, and is likely to turn out a better day's product than the man next to him because he will not be distracted by looking out of the window at things going on in the street.

In a clock factory which uses as gongs spiral coils of tempered wire it is necessary accurately to test and adjust the tone of each gong. This is done by striking the coil, listening to the result, and then making the necessary change by a screw sleeve at one end. In this job which requires the use of two senses only—touch and hearing—is a blind man at any disadvantage after he has acquired skill for this work?

The first attempt in planning occupations for the blind is to send them back to their former trade, if this is in any way possible. And it will be found practicable in more instances than would be imagined. In actual experience competent blind workmen will be encountered in almost every line of employment.

Two satisfactory occupations which are almost traditional to the blind are massage and piano tuning. Men who have been trained in the first subject have gone back to employment in military orthopedic hospitals, where their patients are fellow-soldiers injured in other ways than themselves. The period of training is fairly long and the work only suited to men with certain qualifications, but for those who can learn to be good masseurs, employment is secure and earnings good. In Japan the practice of massage has been reserved as a monopoly for the blind. Piano tuning is for many blind men an ex-

cellent business, but it is a crowded field and care must be taken not to train for it too many novices.

Men employed in clerical lines before the onset of blindness can be trained, with the aid of a few simple devices, to continue their office job.

Many blind soldiers who come from the farms can most advantageously return to the same work. The man without sight is better off in many ways in the country, where he can get around with little difficulty, without the need of a guide, and running small risk of accident. In addition the national interest is served by his continued activity as a good producer.

It may appear at first blush that a blind man could not get on at all in work about a farm. But note the evidence in a letter from a blinded French soldier:

A man used to working on the farm even if he is totally blind can do practically everything around the barns and stables, if he is not lazy or stupid. He can clean up the yards, go for water, rub down the horses and cows, and feed all the animals. It is not hard to recognize with your hands the linseed mash, the barley, and the bran or the oats, and to know also through your hands when the racks and mangers are full, and, when you come back later, to tell still by your hands whether the animals have eaten. You do not need to see to tend the winnowing-machine, to help in putting the grain into sacks, and then to put the sacks in the wagon. You can cut up beets for the cows, too, and you can help in making bread for the family, for in our part of the country bread is made in the house.

The work in the field is harder, I admit, but there are lots of tasks which you think at first are quite impossible—you would have laughed in the old days if anyone had told you a man could do them without seeing—but which now after three or four attempts, after three or four failures perhaps, you finally accomplish. You can easily dig beets and potatoes, unload wagons,

and in the season thresh and spread the hay. I can't mention everything, of course, but there you have already quite a list. In addition, when it rains and you have time on your hands, you can make brushes, as you learned to do in the hospital. I should never have believed that I could be as contented as I am now.

The best known institution in the world for blinded soldiers is "St. Dunstan's," in Regent's Park, London. In a fine old house set in the midst of fifteen acres of beautiful land, are housed the British soldiers who have lost their sight in battle. Its "heart and soul" is Sir Arthur Pearson, who lost his sight several years ago and who has devoted his life to the task of "teaching men to be blind," as he expresses it.

Shortly after the war began, Sir Arthur, then President of the National Institute for the Blind, organized the Blind Soldiers' and Sailors' Care Committee, which set about to find a suitable building where blinded soldiers might be trained. The selection was St. Dunstan's, generously placed at the disposal of the committee by Mr. Otto H. Kahn who had the lease of it at that time. The building was once the country house of the wicked Lord Steyne of Thackeray's "Vanity Fair."

On March 26, 1915, fourteen blinded soldiers entered St. Dunstan's Hostel to start on the journey to self-support and hope. Three years later St. Dunstan's and its annexes held 578 men, after having graduated 434, of which number ninety per cent. had been fully trained and set up in the occupations which they had learned in the school.

The notable feature of St. Dunstan's is its cheerful atmosphere. After the men have surmounted the first few days of depression brought on by the thought of

"living always in the night," they look out for themselves and go about like normal men.

The blinded guests have very little difficulty in getting about at St. Dunstan's. They manage to find their way without the aid of a stick and without being led by the hand. This they are enabled to do by a unique device. Strips of carpet of even breadth run through the center of every room. As long as they can feel the carpet under their feet, they know there is no danger of their running into any obstacle. A visitor at St. Dunstan's relates that two men bumped into each other as they were walking in opposite directions on the same strip, but exchanged greetings merrily and continued on their way as if nothing had happened.

To guide the men when they go about out of doors, other devices have been arranged. On the top and bottom steps of stairways, wood or lead strips are fastened to tell the men where they are. Along the paths leading to the various outlying buildings, railings are placed, with little knobs to tell the men when they come to a turn in the road.

There are amusements such as rowing, swimming, dancing, indoor games—such as dominoes, checkers, chess, and cards; they have a debating society, and almost every man learns to play some kind of musical instrument. They have their theatrical clubs and last December gave an excellent performance of "Babes in the Wood."

But it is not all play at St. Dunstan's. The actual re-education and training are carried on in either classroom or workshop. Those who are assigned to the workshop in the morning are in the classroom in the afternoon and vice-versa. The working day is from 9:30 to 12 in the

morning, from 2:30 to 4:30 in the afternoon, with an optional extra hour for those who wish it.

The classroom work consists largely in the teaching of Braille and typewriting. The men are taught to read and write Braille, both arts very difficult to acquire and involving considerable strain on the mental faculties. To relieve this, the Braille lessons are interspersed with netting, which is something of a hobby, at which a man can make in his spare time five or six shillings a week.

All the men are taught typewriting, which they find enjoyable and at which they usually become very proficient.

Affiliated to this classroom work are three occupations, the successful performance of which requires a knowledge of Braille and skill in the use of the typewriter. These are massage, shorthand, and telephone operating.

To learn massage demands a knowledge of Braille, because many of the requisite books on anatomy and physiology have been put into raised type. Blinded men have been trained as highly skilled masseurs at St. Dunstan's. Shorthand for the blind is a system of condensed Braille, and is written by means of a special little machine. Telephone operating on boards operating with drop signals rather than lights is successfully taught.

In the workshops at St. Dunstan's the men are taught cobbling, mat-making, basket-making, and joinery. Most of the instructors are blind and thus furnish an inspiring example for the pupils.

On a spacious poultry farm, beyond the workshops, men are taught poultry raising on modern scientific lines. They learn to distinguish by touch birds of various breeds, to manage incubators and foster-mothers, to

prepare and truss birds for table, and in general to conduct a paying poultry business. The pupils are also taught rough carpentry, so that they can make hen-coops, setting-boxes, gates, and other farm essentials. A post-graduate course in poultry farming, so to speak, is given at St. Dunstan's Poultry Farm, near King's Langley, and is a month in duration.

Wherever possible a man is returned to his former trade or occupation. It has been possible for men to resume their employment by giving them special courses of instruction or by teaching them special methods. When a man completes his training at St. Dunstan's, he is settled in the trade that he has studied, is equipped with an outfit and with an abundant supply of raw material. Through a carefully organized after-care system, he is visited regularly, his work is supervised, raw material is supplied to him at cost, and he is assisted in marketing his goods.

Graduates of St. Dunstan's earn a fair living wage. It must be remembered that the blind soldier with an earning capacity is enabled to augment his pension which is not affected by increase of income as his skill and earning power increases.

In France at the beginning of 1915, when it became clear that the number of blinded soldiers was going to be considerable, the Ministry of the Interior created a special institution for them in an old building in the Rue de Reuilly, Paris. All the war blind were to be sent there when their medical treatment was completed. Accommodations were provided for two hundred persons. The first group, admitted in March, 1915, consisted of forty men. But soon the home was filled to capacity, and seventeen branches have had since to be created:

three in Paris, two in Lyons, and one in each of the following cities: Amiens, Bayonne, Bordeaux, Caen, Chartres, Dijon, Marseilles, Montpellier, Nantes, Saint-Brieuc, Tours, Toulouse.

The institution is under the control of the Ministry of the Interior. Since its creation, however, it appeared to the director that, in addition, private initiative might be advantageously organized. He created the Society of Friends of Blinded Soldiers, formed of representatives of the Ministries of the Interior and of War, of Parliament, of the Quinze-Vingts hospital for blind, of the teaching profession, of commercial circles, and of the Catholic, Protestant, and Jewish interests. It was through the efforts of this society that the different activities of the institution have developed.

The Reuilly home was created as a "Convalescent Home for Blinded Soldiers," without any precise idea as to what it was to do for its inmates. It was but gradually and empirically that the re-education work has been built up. One month after the inauguration of the home, a very small shop for brush-making was opened. The experiment was successful, and the brush-making shop was soon overcrowded. It is still the most popular with the men. Since 1915, however, the re-education work has greatly expanded by the addition of new trades.

At the present time, there are taught at Reuilly all the standard trades for the blind—brush-making, basket-making, making and repairing of chairs, and so on. The course of massage, which has been a marked success, consists of two sections: massage proper and theoretical instruction in anatomy and physiology. The latter includes a complete course of lectures which it is necessary to write in Braille; ability to read by touch is pre-



Poultry Raising for the Blind. In England, at Fawkham, Kent, men are taught to distinguish between breeds by the sense of touch



Surmounting a Double Handicap. Blind and with one arm gone, this French soldier can cut brushes by means of especially designed tools

requisite. At the end of the course, the students have to pass a very strict examination before a jury of physicians; they are never discharged before receiving their diploma. Since February, 1917, a group of graduates from Reuilly have been employed as masseurs in the military hospitals of Paris, and have given great satisfaction to the medical authorities. Others have found employment at the different resorts, at Monte Carlo, Vichy, Evian, Deauville.

A shoe-repairing shop was established in February, 1916. The work was first confined to pegged shoes, but later an invention of one of the students made possible hand-sewn work also. Several men have graduated and found employment. The first pupil of the shoemaking school is now employed as an instructor in a workshop for blind civilians.

A machine shop, under the direction of a blind instructor, has been in operation for two years. The first twelve pupils are now working in a special shop created for war blind. This shop is now filling orders for several of the largest automobile and machine plants.

A course in piano tuning has been started on the initiative of a prominent piano manufacturer, himself blind. Other courses are in crystal grinding and telephone operating. Organ playing and singing are taught, not as independent vocations, but as possible supplementary occupations in rural localities. Macramé, raffia, and netting are not considered as real trades, but are taught to new arrivals for distraction and as a first preparatory exercise.

As a general rule, all the men learn to read Braille. There has been established at the home a printing shop in which books in Braille are produced. To interest the

men in reading, there is distributed every morning the official war bulletin printed in Braille. Still more effective in stimulating interest, has proved the publication of the "Reuilly-Midi," a small daily, which contains all the news of the institution.

Many of the men learn typewriting, although it is not intended to train them for positions of typists. For the use of those who wish to correspond in ordinary handwriting, the administration of the home has devised a very simple "hand-guide," which permits the blind to write on equidistant straight lines.

A very surprising experiment, which has given excellent results, is a course in fencing, directed by an expert teacher.

In Germany, where a number of institutions for the training of blind had existed before the war, the general policy was that of creating in these institutions special sections for blinded soldiers. One of the most important institutions of this type is that at Breslau, which accommodates about fifty men. The men are transferred to the school after their medical treatment has been completed and stay there for about three months. They are kept under military discipline, and the training is compulsory. Many of the men remain in the institution voluntarily after being discharged from the army; in that case they contribute, out of their pension, for their maintenance one mark a day.

One year is considered as the average length of time required to teach a blind man Braille and one of the standard trades for blind, such as basket-making, brush-making, rope-making, and the like. Of these occupations, basket-making of the rough type is the most popular with the men, especially those of country origin.

Effort is often made to return the man to his former trade. The experience has been successful with several men, former bakers, cigar-makers, watch-makers. In addition to the trades taught at the institution, a number of men have been placed for training in industries, such as munition plants, clothing factories, and so forth.

In connection with the institution, has been established an agricultural training station, intended mainly for peasants. It seems, however, that the blind soldiers of the agricultural class consider any special training as superfluous and are anxious to return to work on their own farms as soon as possible.

The greatest difficulty arises with regard to men belonging to the intellectual classes. Most of them, however, are officers, and the relatively larger amount of their pension permits them to supplement the instruction given at the institution with private lessons. Many have been able to return to their former professions, as lawyers, teachers, and the like, or to resume their academic studies interrupted when they went forth to give battle to the civilized world.

CHAPTER X

IN WAKE OF BATTLE'S DIN

For a number of men who return from the battlefield the world of sound will be forever closed. From detonation of shells, ear wounds, internal hemorrhages, and many other causes men are deafened at the front. They must face life again on a different basis.

Deafness is really more an embarrassment than a physical handicap. Many occupations are open to the deaf, so that their earning power need not be materially affected, but in their social and business relationships they are apt to suffer material inconvenience unless the proper steps are taken to help them surmount their handicap.

The chief aim in treating the returned soldier who has been deafened in battle is to restore his capacity for mingling and communicating with his friends and business associates with the least possible embarrassment to himself or to them. It has been the experience of all who have studied the problem that the best way to help the deafened soldier is by teaching him lip-reading. Once he acquires skill in reading the lips, he becomes again a social being, cheerful and confident, and is qualified for a great number of occupations.

Another urgent necessity is to prevent sensitiveness regarding the handicap. Otherwise a painful situation—both for the deafened soldier and his associates—is sure to ensue. When a man overcomes this difficulty, he has taken a distinct step forward towards success.

It has been estimated that of all returned wounded soldiers one in fifty suffers from deafness in a more or less severe form. Returns from twelve military hospitals in England with a total of 67,799 patients in all show that 919 suffered from some form of deafness. Despite the fact that the number of soldiers who return with hearing impaired is comparatively small, the belligerent countries have made thoughtful provision for their successful reinstatement in civilian life.

First steps to care for the British "Tommy" whose hearing was impaired were taken in Edinburgh, under private auspices, May, 1917. Later the state took a hand when the Ministry of Pensions appointed a special Aural Board consisting of four aural surgeons and a lip-reading specialist. The work was then extended throughout the United Kingdom.

When the secretary of this board is notified of the return of a deafened soldier, he communicates with the local pensions representative in the area in which the man lives. The man is then called before the official aurists and lip-reading specialists for examination as to his eligibility for training in lip-reading, for treatment, or both.

At the headquarters of the board in London is one of the centers of instruction for the deaf. Classes are held morning and afternoon for regular pupils and in the evening for those who are employed during the day.

Since the learning of lip-reading is quite fatiguing, it is necessary to provide some form of diversion for the pupils. In the club at headquarters the men are entertained with motion pictures, in which they seem to take great interest, deriving considerable pleasure from the fact that they can read the lips of the actors on the screen.

One of the oldest institutions for the deaf in France is the Institution Nationale des Sourds-Muets in the rue Saint-Jacques, Paris. Here the teaching of the deaf has been going on for over a century, so that the institution was ready to handle the returned *poilu* when the call came. In some of the classes as many as eighteen soldier pupils have been instructed at the same time. Men are not yet discharged from the army, and reside in a neighboring military hospital. Printing, tailoring, and agriculture are the most successful subjects of instruction at this school.

At Bordeaux the teaching of the deaf takes place at a convalescent hospital on the outskirts of the town. In some classes there were six to eight deafened pupils, in others about double that number. The former sized class has seemed best for beginners, but with more advanced pupils, it was desirable to have a larger number so that those sitting on the sides could read lips viewed more or less in profile. Classes could, however, be held simultaneously in the same room, as the deaf pupils were not disturbed by each other's noises.

It appears that the German War Office established first a center of instruction to which were sent for training all deafened soldiers, but this system was criticized on the ground that it is not advisable for all the deaf to be collected at one place. By reason of the differences in dialect, it has been found better to send the deaf to a near-by university town, where there are experienced teachers of the deaf. The Germans believe that instruction should begin as soon as the patient is out of the doctor's care, and that only six or at the most eight pupils should be instructed at the same time.

The English regard three months as sufficient time in which to teach lip-reading. The French do not require that much time under their system, while the Germans ask for at least five or six months for a full course of instruction.

With lip-reading thoroughly mastered, and the deafened soldier being reaccustomed to social and business relations under his new handicap, almost all vocations are open. Men with a skilled occupation can almost universally return to their former job. A few employments noted as unfavorable for the deafened are those of chauffeur, motorman, conductor, salesman, telephone operator, work where overhead cranes and other shifting machinery is used, or about railroad tracks where hearing is essential to safety. Regarded as good trades are motion picture operating, photography, typewriting, filing, clerical work without dictation, farm work, stock room or shipping clerk, plumbing, tailoring, bookkeeping, printing, baking, and civil service positions.

Among sixty-nine deafened soldiers trained at Lyons, France, thirty-nine were prepared for agriculture, eleven for manufacturing, nine for commerce, and ten for miscellaneous jobs.

The Division of Physical Reconstruction of the United States Army, under the Surgeon General, has established through its Section of Defects of Hearing and Speech a center for treatment in connection with United States Army General Hospital No. 11, at Cape May, N. J.

After a thorough consideration of all the methods employed by the other countries, both allied and enemy, it was considered that the best manner in which to handle reconstruction patients along this line, was to establish a central point at which they could be treated

under full military discipline. It was decided that it was impossible to define, when a patient was first admitted into the hospital, whether he was a patient appropriate for discharge along one of the three lines into which reconstruction patients are to be classified, until he was thoroughly subjected to the line of treatment that was thought adequate for his condition. Not only this, but it would seem from the work in connection with the British and other allied nations' reconstruction endeavors, that the most advantageous course to be pursued in connection with these men was to hold them in the army until physically qualified thoroughly to take care of themselves in their contact with the outside world.

Actuated by these two motives, the chief of the section decided to concentrate all ambulatory cases at United States Army General Hospital No. 11. Cases with multiple injuries and other diseases which necessitate their being retained in other United States Army general hospitals will receive their treatment in these hospitals, from reconstruction aides who will be transferred, during such course of treatment to the hospital at which the patient is confined. By this means the patients receive both their general medical and surgical treatment as well as their aural treatment. This at the same time minimizes the period of time which the patients will have to spend in the hospital.

The wisdom of this procedure has already been demonstrated during the three months in which the activities of the section have been progressing in connection with this work.

It must be understood that patients are receiving treatment along all lines which aid in their restoration.

These men are thoroughly and carefully classified. Many of them require thorough surgical and medical treatment besides those measures which are essential to their auditory re-education. The auditory re-education is not entirely along one line of treatment. Besides the various types of medical attention given these individuals, auricular and speech reading methods are also employed.

One of the first men to be deafened in France was illiterate and so must needs be trained to read and write as well as to interpret the movement of the lips in terms of sound. The patients at United States Army General Hospital No. 11 have shown that true American spirit of enthusiasm and effort. Results indicate that the average period of treatment and training equals the French, and probably exceeds it.

An unofficial service to cooperate with the government authorities has been organized by the Industrial Union for the Deaf and the Volta Bureau. The objects of this service are to aid men to retain their former powers of speech which are likely to suffer from disuse, to teach them to read the lips as rapidly as possible, to educate employers to a realization of the value of lip-reading and thus pave the way for the employment of the deaf, where some hearing is left to develop and re-educate that hearing in the hopes of possible recovery, and to offer vocational advice to those who must enter new and unaccustomed fields of labor. Facilities for the education of the deaf are excellent in the United States, and all will be at the service of the deafened soldier, should their utilization seem wise.

A rather exceptional opening for the deaf is in plants where the noise is such as to impair the hearing of normal workers. One concern which used to deafen totally or

partially each year scores of employees has now stopped the damage by seeking out for the jobs men already deaf, who will suffer, therefore, no further injury. Compensation expense has been cut to a minimum, and deaf candidates for employment are at a premium.

An encouraging augury of the attitude of American employers toward the discharged deafened soldier is the present intelligent utilization of deaf workmen in some of the largest plants. One tire concern, for example, has four hundred employees who cannot hear, and an automobile concern lists three hundred more on its payroll.

With modern provision the transition of the deafened man from the din of the battlefield to profitable employment in industry can be accomplished with difficulty slight indeed.

CHAPTER XI

THE STEP IN TIME

THE greatest number of discharges from the army for physical disability for any specific cause is chargeable to pulmonary tuberculosis. The largest number of pensions awarded in Great Britain up to January, 1918, went to men with lung diseases, which accounted for twelve per cent. of the total disability grants made, and by the end of 1917, a total of 20,000 British soldiers had been invalided home for pthisis. The early discharges from our own army in camp and field were of men who had developed a tuberculous condition.

Many of the cases were due to imperfect medical examination at the time of admission to the army, a considerable number of active cases of tuberculosis being passed in the first rush of recruiting and conscription. Some oversights were due to carelessness of medical examiners, others to the fact that it is difficult for a physician without special experience in dealing with the tuberculous to detect cases in the incipient stages.

There was ample warning in the experience of other countries as to the importance of the examination for tuberculosis. Canadian representatives warned that it should have special attention, adding the caution that every case missed would cost the government over five thousand dollars. And care was taken, but in spite of it, a certain number of men slipped through.

The interesting thing about discharges for tuberculosis is that the disease is almost never contracted in the

army but is brought in during its active condition or, more frequently, while latent or quiescent. In the latter instance the rigors and exertion of camp life have lighted the sleeping fires and made the case active. While the original infection, therefore, accurately speaking, was not incurred in military service, the state of active tuberculosis was due to army work and would probably not otherwise have existed.

The tuberculous soldier almost universally desires immediate discharge from the army, award of his compensation for disability, and permission to return to his home. This would mean, in almost every instance, that his condition would grow progressively worse rather than better. The ideal arrangement would be for him to remain in the army for treatment until he is cured, or at least until his case is substantially arrested. During the period of care his family will be provided for by the allotment of military pay, and the additional allowances made by the government. The opportunity of free treatment and support of himself and his family until he is cured is one that will never come to him again. Propaganda to educate the public to wisdom regarding the disabled can greatly further the probability of the tuberculous consenting to treatment.

Even though the man knows that it is the best thing for his health, it is hard for him to make up his mind to leave his family for a year or possibly for longer, to go alone to a sanatorium. He may conceivably prefer to take his chances on the question of health and life. The matter is made much the more difficult by the location of some of the military hospitals at, seemingly, the ends of the earth, where it is out of the question that he could ever be visited by his family. Were units for the

tuberculous made more accessible, it is likely that the plans for treatment would be more readily acceded to, and the families of the men, seeing with their own eyes from time to time the progress made, would more easily be reconciled to continuance of the treatment.

Even if a man is reluctant to enter upon a long term of treatment, a short period under regular medical supervision will do him a great deal of good, in that he will learn how to protect others from infection at his hands, and will become acquainted with the principles of fresh air, food, sleep, and the like which he can follow out after his return home in the form of self-treatment. In other words, he will learn the factors upon which recovery from tuberculosis depends, and will have become accustomed in some degree to the daily régime. It is largely for this reason that the Surgeon General of the Army has ruled that all tuberculous soldiers *must* be retained under treatment for *at least* three months.

Ever since it has been demonstrated that occupational therapy is of great value in the treatment of the most varied disabilities, the question of its possible value in the treatment of tuberculosis has been the subject of no little debate. Many American and German specialists have maintained that if a permanent arrest of lung-disease is to be secured, a prolonged period of rest must be taken by the patient and that this rest must be "surgical rest" as long as active symptoms continue or so long as fever persists. English specialists, however, appear generally to believe in prescribing a considerable amount of vocational work in all except the hopeless cases, and as soon as the patient who has a "chance" loses the most distressing symptoms. The exercise prescribed is at first walking only, but "such monotonous

occupation is gradually replaced by light and useful work, increased little by little until at last, before their discharge, the most favorable cases do six hours' hard navvy work a day."

There can be no doubt that some forms of occupational activity are of great advantage in the treatment of the tuberculous soldier, if only for psychological reasons. For there is a difference between the frame of mind in which a civilian afflicted with the disease enters upon the treatment, and the attitude of the soldier who is sent to a sanatorium. It has been reported, for instance, that in the Canadian military hospital at Ste. Agathe des Monts, Quebec, "on account of the excitement, danger, and adventure of their life at the front" the invalided soldiers "were not only indifferent to the ordinary methods of treatment"—prolonged rest, followed, after many months, it may be, by gradually increased "doses" of mild exercise—"but openly rebellious against such methods." Within six months of the opening of this sanatorium, one-third of the soldiers had refused to continue the treatment, and fifteen per cent. had to be dismissed for "open insubordination usually terminating in drunkenness." After this experience, treatment along vocational lines, less strenuous than that advocated by the English experts, was resorted to, and with very satisfactory results. Enthusiasm for the treatment has replaced the former indifference, insubordination has been reduced to less than two per cent., and instead of refusal of treatment, there have been applications for extension of time to permit vocational courses to be completed.

This experience makes it clear that the tuberculous soldier presents a special problem, in that methods to

which a civilian submits voluntarily and without a murmur become dangerous because of their psychological effect on the average soldier, the prolonged rest seeming nothing more than enforced idleness, leading therefore to irritation, depression, discontent, boredom, and frequently to sudden rash acts. Obviously, all these undesirable results can do more to delay improvement than a system of well-regulated occupational therapy possibly can.

The soldiers' sanatorium at Ste. Agathe, Canada, is typical of many establishments that have been founded the world over to care for the unprecedented numbers of disabled soldiers. Ste. Agathe is a sleepy, picturesque French-Canadian hamlet four hours' train journey into the hills and forests northwest of Montreal; before the war it had its summer colony, its winter sports, its inn, and a sanatorium for tuberculous civilians. In the winter of 1916, the inn was taken over for the treatment of tuberculous soldiers by the Canadian government, and converted into a sanatorium with a capacity of seventy-six beds. Since that time, the other sanatorium, which still has its quota of civilian patients to care for, has placed fifty beds at the disposal of the military. After the experience to which reference has been made, the military hospital was provided with specially designed workshop and school buildings.

In accordance with common sanatorium practice, the soldier-patients at Ste. Agathe are divided into three classes. The first class consists of infirmary cases, in whom the disease is in its acute stage; they are confined to bed until the distressing symptoms disappear. Under careful supervision, these patients are permitted to beguile the tedium of the sick room with knitting, draw-

ing, crocheting, cardboard work, raffia weaving, and study.

The second class consists of porch cases—those which have progressed so far as to go to the dining room for meals and look after themselves, spending the day on reclining chairs in the open air. In addition to the occupations permitted the infirmary cases, porch patients may take up reed basketry, stenography, and penmanship as their strength increases—but always under careful surveillance. On the first indication of trouble, they are immediately returned to the former classification until all danger is passed.

Class three is subdivided into six groups, according as the time prescribed for exercise and vocational therapy varies from fifteen minutes to two hours daily. As soon as a patient has progressed to the point where he can be permitted half an hour's exercise a day, he is given the opportunity of spending half this time in the workshop. Class three patients are offered the choice of instruction in basketry, carving, clay modelling, metal work, picture framing, illuminating, engraving, or, in the school building, of instruction in French, English, and in subjects preparatory for civil service positions. In the summer, the more favorable cases take up a little gardening. As in the second class, these patients are constantly watched for dangerous symptoms; as soon as any appear, the patient is returned to a less advanced category.

The workshop and the school are very simple structures designed to afford the maximum of fresh air and comfort. The classes are well-attended, and relapses are rare. Twenty-nine out of thirty-two patients who prepared for civil service positions have since passed their examinations with good averages.

The great defect of sanatorium treatment has hitherto been the fact that a large number of cases discharged with the disease apparently arrested sooner or later suffer a relapse. This has been true particularly of those patients who must support themselves, usually at some manual trade. The chief reason for this condition is doubtless the fact that the sudden change from perfectly hygienic surroundings with plenty of good food and fresh air and medical attention to the conditions under which the less well-off must so frequently live and work is a strain which many patients cannot withstand. It is therefore important that the period after discharge be wisely considered and planned for.

With this fact in mind, the army medical authorities in the various belligerent countries both at home and abroad have taken a number of preventive and precautionary measures with regard to this critical period. One of the obvious steps was the consideration of vocational possibilities. All occupations involving severe physical exertion or prolonged stay in a dust-laden atmosphere are impossible. The best seem to be outdoor and semi-outdoor occupations ranging from farmer to chauffeur, from policeman to ticket-collector and traveling salesman, and the like. Most patients seem to prefer, however, to return to their original vocations; and whenever the working conditions permit it the authorities make no objection. Even the best occupations have features that are not ideal for the worker with a tubercular history. Indeed, the factors that enter into the problem are so many and varied that almost every case must be judged on its own merits. Nevertheless, it is most important that it be so judged, and that steps be taken in each case to eliminate as many objectionable features

obtaining under the former working and living conditions as possible. In Germany the organized cooperation of the employer in this direction is asked for.

Recognizing the vital importance of the post-sanatorium period, the Surgeon General of the United States Army has approved a plan for "after-care" which involves the cooperation of various civilian agencies. Cooperation is secured through the National Tuberculosis Association. This body forwards the names of all soldiers invalided because of lung-disease, and of all civilians rejected for army service for the same reason, to such local organizations as public health boards, state anti-tuberculosis societies, and the local agencies of civilian relief of the Red Cross. These agencies share the work of supplying the War Risk Insurance Bureau with the required data concerning the economic and social circumstances of the disabled soldier and his family, of providing such medical examination, attendance, and other care as may be needed, the Red Cross assuming the burden of supplying the family with any necessary financial relief during the period before this duty is taken over by the proper community relief organization.

Another step in the direction of "after-care" that seems to have been taken simultaneously in the United States, in England, in Germany, and perhaps elsewhere, is the development of an institution that is to serve as an intermediate step between release from the sanatorium and return to complete economic usefulness. In England these institutions are called "farm colonies," in Germany, "convalescent work-homes"; in the United States they have as yet received no generic designation. But the purpose of them all is very much the same—to take up the treatment where the sanatorium must properly drop it.

The sanatorium strives to retain its patients until the disease is diagnosed as "quiescent" or "arrested." The patient so released is rarely in possession of his full strength. He has been living an artificially sheltered life, even though he may have been engaged in vocational work for a number of hours daily prior to his discharge. Psychologically and physiologically he is not always fit to resume forthwith the struggle for existence among his fellows. It is at this point that these new institutions fit in, their primary purpose being to bridge the gap, to provide a "hardening" period. A secondary but very important purpose is to continue the vocational training already begun in the sanatorium.

These institutions take various forms. In New York City, after an investigation had revealed the fact that forty-five per cent. of the patients of a certain sanatorium had relapsed or died within six monhs to two years after their discharge, the Committee for the Care of the Jewish Tuberculous decided on a system of after-care, one of the features of which was the establishment of a factory for employment of some of the cases. Since over sixty per cent. of their charges were needle-workers, the factory was fitted up to enter this field of work. An ordinary well-lighted loft was rented, additional windows supplied, machinery installed. The windows are always kept open, a comfortable temperature is maintained, the strictest hygienic conditions prevail. Only "negative sputum" cases are accepted. For a number of months after admittance, the workers are examined every week or two, later on every three or four weeks, and, after six months, every four or five weeks. Work is paid for on a piece work basis at rates at least as good as those obtained by normal workers elsewhere. The employees

work from two to eight hours daily, according to the doctor's ruling.

As a result of this intermediate institution and other after-care—such as visiting, home-instruction in hygiene and treatment, the provision of financial aid when necessary, and the like—relapses have been kept down to fifteen per cent. In a recent report by the director of this institution it was emphasized that for the past seventeen months the factory has been entirely self-supporting. It is probable that similar institutions will play a part in the after-care of the military tuberculous.

It will not be long, doubtless, before large industrial establishments will find their way toward cooperating in this work by assigning certain positions—whole departments, perhaps—especially suited to the tuberculous as opportunity for either the permanent employment of such workers or for employment during the hardening or post-sanatorium period. One of our largest automobile factories has already undertaken cooperation of this sort.

Great benefit to the community will ensue from successful provision of after-care for tuberculous soldiers, and conversely great injury will result from half-hearted attention to the problem.

CHAPTER XII

BRINK OF THE CHASM

THE force of modern high explosives and the strain of trench warfare have added to the old sad list of soldiers' disabilities a new one, known as shell shock. The term is familiar to everybody, but probably many people have no very definite idea of the condition it describes.

You may have seen a Canadian officer home on a furlough, suffering, you are told, from shell shock, and have remarked his haggard eyes, his nervous starts, the resolute grip on his cane by which he tried to conceal the trembling of his hand. Or you may have read of shell shock victims in the hospitals, men who jerk and shake in every limb, whose minds have become a blank, or who are blind and deaf from shock. You have perhaps not realized, however, that shell shock is only a new expression for an old class of diseases, diseases of the nervous system which attack men in peace or in war when they undergo great strain or shock. Shell shock is simply a collective term for the well known psychoneuroses, hysteria, neurasthenia, and the like, brought on by the events of the war. A more accurate term would be "war psychoneuroses" or merely "war-neuroses." The war-neuroses, just as the neuroses of ordinary life, are purely functional nervous affections and are not caused by a physical injury to a nerve or to the brain. A victim of shell shock may be unable to raise his arm or to speak, but his condition is utterly different from that of the man whose arm is paralyzed because the ulnar nerve

has been severed by a bullet or who has lost his speech from a shell splinter in his brain. In the shell shock patient the psychic impulse to move the arm or to speak cannot be translated into action; apparently the patient has forgotten completely how to move the arm or how to speak although the physical mechanism for the movement or speech remains intact.

The number of men disabled in the present war by nervous and mental diseases—shell shock, hysteria, neurasthenia, and insanity—is large, but perhaps not surprisingly so when one considers the almost superhuman endurance and fortitude demanded of the modern soldier. In British pension statistics dealing with men discharged from the army up to May, 1918, shell shock ranks with the major disabilities, accounting (with insanity and epilepsy) for seven per cent. of the discharges. During the same period rheumatism disabled only six per cent. and tuberculosis eleven. These figures do not, however, represent the full total of the nervously disabled, for many men discharged for other disabilities also suffer from nervous disorders. The number of British pensioners afflicted with nervous diseases is stated by one authority to be nearly twenty per cent. of the total.

Cases of insanity among soldiers differ from those occurring among civilians only in the war coloring of the sufferers' delusions. In the allied countries they are treated by the army medical service until they recover or until they are recognized as incurable, when they are sent to regular hospitals for the insane.

Classed together under the term shell shock are many different kinds and degrees of nervous disorder. These range from a temporary loss of self-control to such a severe shattering of the nerves that the patient is a

mental and physical wreck. Symptoms vary greatly in different individuals and are both mental and physical in character. Some men appear tired and depressed; others are irritable, worried, or terrified. They are usually afflicted by severe headaches, and at night they are troubled by violent nightmares. A common type of war-neurosis is the hypochondriac with his thoughts constantly centered upon his real and imaginary pains. Inability to concentrate the attention on anything marks another type, and still different is the man who sinks into complete mental torpor, sitting for days indifferent to all around him, too apathetic to wipe away a tear that may roll out of his eye. Other mental symptoms are tangled thoughts and partial or total loss of memory. On the physical side, the victim of shell shock frequently has a disordered heart action and strange tremors in his limbs. His head may waggle uncontrollably and pitifully, or his feet drag helplessly along the floor. Among the severer effects are puzzling cases of muscle contractions and paralyses, authentic signs of physical injury without a scratch on the body. A large number of shell shock cases lose temporarily their sight, hearing, or speech, becoming in all reality blind, deaf, or dumb though there has been no injury to their sensory organs or nerves.

The derangement of the nervous system indicated by these symptoms is inadequately described by the term shell shock, for the condition occurs in men who have never heard an exploding shell. It is not necessarily caused by the concussion of high explosives with the accompanying noise and horrid sights—the psychic trauma of battle—but is as often brought on by the physical and emotional strains the soldier has to bear.

Great fatigue, lack of sleep, cold, hunger, mud, and filth wear a man down to the breaking point. Then fear begins to clutch at him, and worse, the fear of being afraid. He struggles with his fear and conquers it, but each victory is at the cost of nervous energy. He suppresses all expression of his emotions and cultivates a soldierly indifference to the loss of comrades and the ghastly incidents of war, but the suppressed feelings wait their chance to gain the upper hand. At any time now the collapse may occur, or it may hold off until it is precipitated by some violent shock—the explosion of a shell which buries him beneath corpses and debris, or bad news in a letter from home.

Even when the actual atmospheric concussion from an exploding shell is violent enough to knock a man unconscious, it does not appear to be the prime cause of the nervous collapse. Men who are severely injured by shell fragments are only slightly affected by shell shock, while men who escape serious bodily injury suffer the greatest nervous disturbance. As has been said, the physical and emotional strains of the soldier's life play an important part in the result, but in many cases the determining cause is an innate nervous instability, a predisposition to hysteria or neurasthenia. Many men are temperamentally unfit to be soldiers, and these are the likeliest victims of shell shock. They are often men who have displayed great bravery, men who have volunteered for desperate trench raids or to carry despatches through a barrage, but they lack the nervous energy for keeping up their effort. Far from being a reflection on a man's courage, shell shock shows that he has spent himself to the utmost.

When a man is nervously spent, his will loses the mastery and long suppressed desires or fears rule. In the shell shock victim the dread of battle, the fear of death and injury, so long kept under, holds sway over both mind and body. The man is not a malingerer, but his mind exerts a subconscious influence on his bodily condition. While his body is unfit, he cannot go back to the front; under the influence of his ruling wish to escape further suffering, his body therefore refuses to mend. Many cases of shell shock are clear examples of such hysteria. One case reported by an Austrian physician was of a South Slav soldier whose leg after shell shock remained stiff for many months. In the course of the man's hospital sojourn he contracted tuberculosis, a ground for discharge from service, and the leg rapidly recovered. In other recorded instances, where the eyesight has been temporarily lost, the sight has returned most slowly to the shooting eye.

The treatment prescribed for shell shock cases in the early acute stage is rest in bed, good food, and cheerful surroundings. This treatment is provided for the British and French armies in special shock hospitals just behind the lines. Under it a large proportion of the cases rapidly recover and in three or four weeks are usually sent back to the front. Cases which show that they will not recover quickly are evacuated to the base hospitals, and then, if they are British soldiers, are sent back to England, the milder cases to general convalescent hospitals and the severer ones to special neurological institutions. Discharged soldiers still suffering from nervous diseases are able to obtain additional treatment in certain so-called Homes of Recovery organized for their benefit by the Pensions Ministry. These Homes of Recovery

have done invaluable work in restoring to nerve-shattered ex-soldiers the ability to live and work as normal men. Their success seems to have been due not a little to the fact that the men taking treatment have no fear of being returned to the front when they are cured.

Segregation in special institutions seems on the whole desirable for nervous patients. Against it has been urged the facts that a patient's depression or irritability may be increased by his companions' nerves and that he is apt to imitate others' symptoms, but these arguments have not been supported by experience. On the other hand it has been found that a nervous case in the general wards of a hospital attracts painful attention from the other patients, and that his tremors, stuttering, or shuffling gait are made the subject of their jokes. A man whose ills are what wounded men call imaginary can expect from them little sympathy.

In any institution where shell shock cases are successfully treated, the greatest care is taken to make the surroundings cheerful and to have the atmosphere charged with optimism. Patients of this kind are extremely sensitive to suggestion. If they are to recover, everything around them must suggest hope and recovery. The first step in the cure is to make them believe they are going to get well. In this task the personality of doctors and nurses plays a big rôle. They must have common sense, real sympathy, the strength of will to disguise it, and great confidence, but above all the power to command their patients' confidence.

It is the doctor's first duty to find out what is worrying his patients. He may use the simple method of sympathetic questioning or the modern psychoanalysis, but his aim is always to bring to light the hidden

complex which is at the root of their nervous symptoms. He then tries to make the patients understand their symptoms, to face squarely the facts responsible for their breakdown, and to build up their will power. Physical treatment, such as electric currents, baths, and massage, may be a valuable adjunct to psycho-therapeutic measures but can easily be overdone. If it tends to center the patient's interest more closely on his condition, it is definitely bad.

Suggestion has effected some sudden and dramatic cures and is always a powerful aid in furnishing the initial impulse to self-control. A simple illustration is the man who insisted that his left leg was completely paralyzed. Asked about the strength of his right leg, he kicked out with it strongly, unconscious that he was at the time standing on his left. Similarly, men who have lost their power of speech have found it when physically hurt or through suddenly joining in the well-known chorus of a song. Suggestion cures are, however, not always permanent, for while the fixed idea may be dissipated, the state of mind which made it possible remains. This must be changed by longer treatment. The affected muscle groups must also be systematically re-educated before the cure is complete. The case of a Canadian soldier suffering from paraplegia is interesting both for the psychic cause of his trouble and for the way in which he was cured. The man in question received a slight wound and a severe shock from the explosion of a shell which blew in the wall of the trench where he was standing. The wound healed rapidly, but the purely functional paraplegia persisted with great stubbornness. On being questioned, the man said that he had seen a companion have both legs blown off; later

he admitted that he had a sister unable to walk and that he had dreaded receiving an injury which would make another helpless invalid in the family. In the endeavor to prove to him that his fears were unfounded, the doctors anesthetized him and while he was unconscious raised his legs in front of him with bent knees. When he came out of the anesthetic, he was told that he had himself raised his knees and was ordered to lower them into a more convenient position. The result was a distinct movement of the muscles. From this time the man knew that his muscles were not lifeless, and through graduated, continued practice he finally regained complete control.

Since the main factor in the cure of any functional nervous disease is the will of the patient, everything must be done to make life seem worth while to him. Games and gentle sports in the open air are beneficial, but better than anything else is some light interesting work. Almost any kind of work will serve the purpose if it is not too fatiguing or so monotonous that it becomes mechanical. Creative work with the fingers is usually attractive to nervous patients. If it is in addition work in which they can progress by definite steps, always conscious of their own improvement, it seldom fails to have an excellent effect upon both their spirits and their bodies. After a few weeks or even days of some congenial occupation, men begin to take a new interest in life. Their eyes brighten; their limbs stop trembling; they are no longer racked by dreams. With the awakening of their interest their will and initiative are also aroused, and their cure then is not far off.

Various occupations have been introduced into the hospitals and convalescent homes of our allies as a means

of refitting nervously shattered men for the business of life. At the Central Hospital for Nervous Diseases at Cobourg, Ontario, to which are sent the severer shock cases among the Canadian returned soldiers, patients are started at some simple occupational work such as basketry or clay modeling; as they become capable of greater effort, they are directed to carpentry, pottery, or gardening. At Golders Green in London, the first Home of Recovery for discharged soldiers unable to earn a living because of their nervous condition, great emphasis is placed on intensive garden culture. French methods are used—cold frames, *cloches*, heavy fertilizing, and other means of forcing—and a surprising number of vegetables are produced on a small plot of ground. It is hoped that the work will not only serve a remedial purpose, but that it will provide a livelihood later to men who can never make a complete recovery. In connection with the garden culture, there are operated carpentry, ironworking, and basketry shops for making the glass frames, packing crates, tools, and containers. Other shops are for motor mechanics, electric fitting, and shoemaking.

Most of the occupational work for men disabled by shell shock has value as a therapeutic measure rather than as trade training. Its object is the restoration of the men's health, not their re-education. When they are recovered, they are expected to return to their former occupation. If after being cured of their nervous troubles they are still unable to take up their old calling, they must go elsewhere for serious training in a new trade.

CHAPTER XIII

ALLIES ON THE CONTINENT

When the call to war broke in upon the serenity of France, most of the able-bodied population sprang to the colors—with the result that we now know so well. There was no provision then for the training of cripples, but as men began to return disabled, an organization for their re-education was hastily built up to meet the necessities of the situation.

What respect we must have for the work done in France! With her national existence threatened, with a powerful enemy not far from the gates of Paris, that gallant country with which the United States is now proud to be allied, gave careful thought to the future of the men injured in her defense. And in spite of the difficulties, that work for disabled soldiers was so creditable and so imbued with sound spirit as to serve for example and inspiration to the world.

The enterprise which prompted the foundation of the Lyons school, as already described, was not unique. A similar spirit prevailed in the foundation of scores of similar schools throughout the republic. The men who founded them were all pioneers, working it is true on a common problem, but each almost on original lines. We may properly expect, therefore, that French experience will show much to follow and much to avoid—the one as helpful as the other.

In almost every community in France, as men discharged from the army because of their disabilities

began to return to their homes, societies were formed for the purpose of organizing some system of aid to the broken and often destitute soldiers. These various societies and committees throughout France soon recognized that the Lyons committee headed by Mayor Herriot had found the best way for really aiding disabled men—a far better way than giving them money allowances or placing them in the trifling jobs open to untrained, handicapped men. The committees in the larger cities, which were able to collect the necessary funds, took steps therefore to open similar schools in their communities. In Montpellier, Bourges, Saint-Étienne, Bordeaux, Rouen, Toulouse, Marseilles, Pau, and many other cities schools were organized during the first eighteen months of the war. The expense of the undertaking was in most cases originally borne by private subscriptions, but as the value of the work became generally recognized, the municipal or departmental government assigned funds for its support, and in course of time the school usually passed under the control of one of these administrations.

The first re-educational school to be established and maintained by the national government was opened at Saint-Maurice, a suburb of Paris, in May of 1915. The government took over for this purpose a group of buildings which had been used as a public convalescent home and a home for industrial cripples. It installed here not only a finely equipped trade school with dormitories and workshops but also a military hospital in which a certain number of beds were reserved for men who wished to take courses in the school. By this arrangement hospital treatment and trade training were dovetailed; that is, men were enabled to start their occupational work before the completion of their hospital

treatment. Most of the provincial schools had no such hospital connection, nor did they at first desire it, being of the opinion that a man should be thoroughly cured of his wounds before he attempted any kind of work. After two years of experience, however, the value of co-operation between hospital and school was apparent, and the government took measures to attach the existing schools to military hospitals in the vicinity and to organize new schools wherever there were no re-educational facilities within the reach of convalescent patients. It is now an accepted principle with French authorities that every man, before he is discharged from hospital, should have the opportunity to take up some form of training for self-support.

The schools have found their usefulness greatly increased by this arrangement, for it has enabled them to recruit more pupils and to obtain better and quicker results. Patients in a hospital, with the example of their comrades before them, can be more easily induced to enter upon a course of training than men who have returned to their homes and been already a little spoiled by the hero-worship of their friends and families. Work begun as early as possible in the convalescent period is, moreover, an excellent preventive of that malady sometimes known as hospitalitis, which so insidiously attacks the will and ambition of long-term patients. The saving of time to the men themselves is of course invaluable.

Some of the societies organized in Paris to render aid to the returned soldiers have acquired a nation-wide membership and through powerful public appeals have been able to raise large sums for their purpose. Part of their resources have been devoted to establishing

employment agencies and to furnishing better artificial limbs, but more and more of their energies are being turned toward providing opportunities for re-education. This they have done in general through financial aid to schools started by others, though wherever they have perceived the need they have created new schools. They have also placed large numbers of men as apprentices with private employers.

An interest in the future of French industry, joined to an earnest desire to help the glorious *mutilés*, has influenced other groups to take up the work of refitting injured men to be productive wage-earners. Those trade unions which already possessed facilities for training apprentices in their craft have opened the doors of their schools to returned soldiers, while others have organized teaching workrooms and conduct large classes of the disabled. Employers large and small have shown their eagerness to cooperate in this work. Many have opened their shops to learners on favorable terms, and others have formed schools in which they provide instruction in the various trades used in their shops. The national schools which before the war gave special training in business, the skilled crafts, or agriculture have organized new courses for the disabled. These courses are shorter and necessarily less complete than the regular courses for young apprentices, but they enable disabled men to acquire sufficient working knowledge of the trade to obtain employment in it.

Since a majority of the wounded *poilus* are peasants whose homes are in tiny villages far from factories and shops, it has been necessary for most of the schools to teach simple village trades. The movement cityward has to be combated in France for the sake of the nation's

future prosperity, and schools have therefore had to guard against teaching trades which would take men away from their homes on the land and concentrate them in industrial centers. The peasant who can no longer follow the plow or swing the scythe must not be uprooted from his old surroundings, but must be taught a trade in which he can earn a living for himself and his family in the old neighborhood. Almost every French village can use a tailor or a shoemaker, usually a saddler and harness-maker, too, and a basket-maker who can supply the particular kind of container used for the local products. There are also always pots and pans to be mended—a tinsmith is needed for that—and there are countless calls for a carpenter. These then are the trades most frequently taught in the provincial schools. Of them all the most popular with the men is shoemaking. In practically every school throughout the country one finds more pupils in the shoemaking section than in any other manual trade. In explanation of this fact one of the most successful re-educators in France has written that the men are attracted by the prospect of being able to set up their shop in their own house, so that between nailing on new soles they can run out and hoe their potatoes or cultivate a few grapes. In many parts of the country where the peasants wear wooden sabots or the clogs with wooden soles and cloth uppers known as *galoches*, sabot and galoche-making share the honors with shoemaking. Tailoring does not attract the returned soldier, and though there is a demand for good workmen in the trade many schools are giving up their classes. All of these trades with the exception of carpentry have been found within the capacities of men with leg amputations and have in some instances been



A New Way to Sharpen a Scythe. With two arms gone and one eye missing, this French poilu can earn his living



Back to the Soil. It takes but one real hand and one real leg to plow the fields of a small French holding

mastered by men with lesser arm injuries. A carpenter with a leg amputated can do bench work but cannot mount scaffoldings. Since carpentry is, however, always an arduous trade and beyond the strength of many wounded men, it has been replaced in many schools by cabinet-making.

Favorite courses with men who wish to practise a trade in the city are those which make them mechanics and machinists. Peasants with a mechanical turn have opportunities to become farm mechanics, or men qualified to operate and repair tractors and other agricultural machinery. In the old days there would have been little enough demand in the French countryside for skill of this sort, but the war has changed all things, even the unchanging methods of the French farmer, and now in an effort to replace the labor of the peasant lads who have died on the battle line, an increasing number of tractors are being imported from America and put to work upon the fallow fields. The schools teach men not only to operate them but also to repair them and even to replace parts upon the forge or lathe, for many machines will go into remote districts where they have never been seen before.

A large number of men who before the war worked in the wood, leather, or metal trades are being trained to make artificial limbs. This is a growing industry in France, and the need for skilled workmen is acute. Two good hands are as a rule required for it, but the loss of a leg need not be a handicap. Indeed, it may even be an asset, for who is so well fitted to improve old models or to make new inventions as the man who is conscious of the defects of his own artificial leg? Disabled French soldiers working in school shops have devised many

useful appliances and are now turning out large quantities of limbs for their wounded comrades.

Toy-making has been selected as a good trade to teach disabled soldiers for two reasons—because there is a general wish to see an industry formerly monopolized by the Germans built up in France and because it contains openings for one-armed men. At the École Joffre in Lyons one-armed men cut out the flat toys by means of a band saw, turn others in the round at a lathe, and paint the droll faces and quaint costumes which make French toys a delight to old as well as young.

One-armed men are also employed at the École Joffre in making paper boxes and paper bindings. Some processes in bookbinding are beyond their powers, but they can do all the work on notebooks, pads, and ledgers. They do not work as quickly as other men, but by specializing at one machine they can acquire sufficient proficiency to earn a fair wage. The school hopes to place many of them as foremen or examiners, positions which do not require constant manual effort.

Work with a lathe or band saw, in the experience of several schools, yields a good return to men who have lost an arm. French varnishing has also been found to be suited to them. Pottery is another possible trade for men so handicapped. There are innumerable seated trades in which men with leg injuries can do a full day's work, but there are comparatively few in which the one-armed can compete with uninjured employees.

Since so many of the manual trades are closed to them, the majority of the one-armed in French schools are being trained for office positions. They are taught bookkeeping and business usage, stenography and typewriting, and afterwards placed in banks, business

houses, and government offices. Often common school subjects, such as writing, French composition, arithmetic, and geography, are included in the course, in order to supply the deficiencies of the soldier's previous education or to brush up long-forgotten learning. Some general schooling is also given to the men learning trades, usually for an hour after dinner in the evening.

Another kind of office work in which badly disabled men have achieved real success in France is industrial design or drafting. Men who have lost the use of one arm, even those who have suffered amputation of the arm, have been able to acquire skill in the work and afterwards to obtain good positions as tracers or detailers. Many of these have had no previous training in work of the kind, often no technical background at all, though machinists and men in the building trades incapable of the activity and strength required in their old work have found it particularly interesting. In schools where the draughting course has been most successfully developed, several branches of design are taught, so that a pupil can specialize in that for which he has most talent. In the municipal school for disabled soldiers at Paris, for instance, the course includes draughting for machinery, building construction, furniture, architecture, and landscape gardening.

Sometimes twenty or more different trades are taught in one school in order to meet the needs of men with all sorts of different injuries and from many different localities. Such a variety of opportunity is to be found in the larger schools of Paris and Bordeaux, where from two to three hundred pupils can be cared for at one time. There are, however, a number of smaller schools, situated in regions where there is a predominant local

industry, which teach only the one trade. Thus at Saint-Claude, a small city in the Jura which is the center of the diamond-cutting industry of France, the school organized by the townspeople for disabled soldiers teaches nothing but diamond-cutting. The school at Oyonnax teaches only the different branches of the celluloid industry, thereby fitting men to go into the numerous celluloid factories in the vicinity. The national school of clock-making at Cluses near the Swiss border is adding to the number of renowned clock and watch-makers of that region. In Paris there are special schools for novelty jewelry-making, glass-blowing, tapestry-weaving.

In the early days of the re-education movement, when schools to teach new trades to the disabled were springing up all over the country, the importance of training for the farm was not sufficiently recognized. A few schools taught truck gardening with perhaps poultry or rabbit raising, but there was no thorough-going effort to induce the wounded farmer to go back to his old useful work of producing wheat or milk or sugar beets to feed the nation. When it was seen, however, that the shortage of farm labor was one of the most serious problems facing the country, the need was clear for training which would enable a disabled man to work on a farm and to profit from owning a farm. This training is now being provided by the Minister of Agriculture in the existing agricultural schools and by some private associations in newly organized farm schools. An agricultural school for French *mutilés* is also being conducted by the American Red Cross, which has recognized the urgent need of fitting the wounded to return to the land.

The first purpose of the instruction given is to show the unhappy, often hopeless farmer that he is still capable of hard outdoor work. Practice in the management of his artificial limb and in new ways of handling his old tools will do this for him and at the same time give him back his courage and revive his old interests. Some men go back to their homes after these first few weeks of readaptation, but others are persuaded to stay for a longer period. They are then taught modern methods of general farming, including scientific fertilizing, the prevention of pests, and the use of labor-saving machinery, or they take up the study of some branch of farming, such as butter and cheese making, sheep raising, or bee keeping. It is hoped that after this instruction men who before the war were but farm hands will have the requisite knowledge for managing a small farm of their own. The means of acquiring a small piece of land have been put within their reach by the recent passage of a law which enables disabled soldiers to borrow money from the agricultural banks at a very low rate of interest for the purpose of buying or improving agricultural property. The sum is small, being limited to ten thousand francs, but holdings are also small in France, and much can be raised on them by the intensive industry of the French farmer. Returned soldiers who are already proprietors will perhaps derive even greater benefit from the law, in that they will be able to re-stock their farms and buy new machinery, and so begin their new life with perhaps a fairer start than before.

Mayor Herriot of Lyons—to whom can be attributed so much that is good in the French measures for the disabled—decided to provide free board and lodging for his pupils while they were learning their new trades, and

most of the other schools followed his example. The re-education school in France is therefore usually a boarding-school with dormitories and dining-halls as well as classrooms and shops. Whether trade training given under these conditions would appeal to our soldiers on their return from overseas is open to discussion, but the system is apparently admirably suited to the necessities and disposition of the French *mutilé*. By living in the boarding-school the pupil from outside the city enjoys cleaner quarters and a better chosen diet than he could obtain in the usual working-man's boarding-house; he is less tempted to cut his classes or his shop work; and he comes into closer relations with his instructors. These through their more intimate acquaintance with his problems are better able to help him over the difficulties and discouragements which are bound to beset him during the early period of his training.

The discipline in the schools, though not military, is fairly strict, but the pupils seem to submit to it with entire good grace. They are usually required to wear a special uniform and they are in many places allowed to leave the grounds only on Sundays and the Thursday half-holidays. If a pupil breaks the rules, he may be warned and deprived of his leaves, but if he continues to show a bad spirit, he is simply sent away from the institution. The authorities want only sober, industrious men who will make the most of the opportunities offered to them. A man who imagines that he is there for anything but work soon finds that his place is needed for some more earnest pupil.

While the boarding-school principle generally prevails in France, there are numerous day schools, the guild schools in Paris for instance, which have been very suc-

cessful in their teaching, and there has been some use of the apprenticeship system. The apprenticeship system trains men by placing them as learners in shops and factories. It has some obvious advantages over the school method—it is more economical in that new workshops do not have to be fitted out; it offers the choice of an almost infinite variety of trades; and it allows the men to work and live under more normal conditions—but there is always danger that the instruction will not be so good. Too often an apprentice is treated simply as cheap labor and gets no chance to learn the different processes of the trade. At Tours, however, where the system has been put into practice rather more extensively than elsewhere in France, it has had excellent results. The director of the work at Tours, a citizen who gives his time, is a man of rare judgment in placing men and of untiring devotion in watching over their progress, by force of which qualities he has been able to overcome many of the usual obstacles to successful apprenticeship. Other dangers which everywhere lie in wait for the disabled man when he is first thrown on his own resources—discouragement, gambling, and drunkenness—have been guarded against at Tours by housing and boarding together all apprentices without homes in the city. Many of the advantages of the boarding-school are in this way secured to the men, and there can be some supervision over their habits and leisure hours.

In a boarding-school men receive their living and often their clothing and laundry as well as their instruction without cost to themselves. If they attend a day school, they receive from some aid society a small allowance, three or four francs a day, which is expected to provide them with the necessities of life. In addition, most of the

schools pay their pupils wages, a small sum at the beginning, which increases as the man's skill increases. Often these wages are paid out of the proceeds of the sale of the articles made by the pupils, the sum being divided among them in proportion to what they have done. At least a part of the money thus earned the men are expected to save so that they will have the wherewithal to buy the tools and equipment they will need when they set up for themselves. The family of a man in training has either his pension, which is never touched by the school, or the separation allowance which they received while he was in the army.

As has been said, the chief re-educational schools of France, with the exception of the national institute at Saint-Maurice, were originally financed by subscriptions from individuals plus grants of money from the city or department in which they were located. Later, as the very great national importance of their work was recognized, most of the schools received financial aid from the national government, submitting at the same time to government inspection. It then became apparent that there should be some government department which could efficiently oversee the work of the schools, coordinate their efforts, and work out a uniform system of re-education for the whole country. A bureau known as the National Office for discharged and disabled soldiers was accordingly created, with headquarters at Paris and branch offices or committees in each of the eighty odd departments, or administrative districts of France. It is the duty of the departmental or local committees to see that every returned soldier gets what he needs in training or employment; if facilities are inadequate, then these committees should see that the needed

classes or schools or employment agencies are organized. The National Office itself is charged with giving a common direction to the work and with seeing that the best interests of the *mutilés* are in every way served.

Good jobs are easily found in France for disabled men who have been re-trained for work. In fact, most of the graduates from the French schools have secured better positions than they had before the war. They have usually obtained their positions through the school where they trained, or, if the school did not undertake any placement work, through the local employment office for discharged soldiers. A great many employment bureaus for discharged soldiers were opened by unofficial aid associations during the first months of the war, but the work has now been mainly taken over by government bureaus under the control of the Minister of Labor. Local offices are now to be found in every city and town; exchange agencies for these are located in the prefectures, or capital cities of the departments; and there is at Paris a clearing-house for all the agencies in the country. All agencies have been instructed that they should whenever possible settle men in the district in which they lived before the war and either in their old trade or in an occupation closely connected with it. They have also been warned to make sure that the situations they offer are suitable ones for handicapped and often sadly shattered men. The industry in which a disabled man is placed should not be one with a slack season when the least efficient workers will be laid off, and the working and living conditions should be good. Above all, the individual should be really fitted for the position. There should be no placing of men in the first position that happens to turn up in the idea that the

employer's patriotism will make up for the workman's incapacity. These are surely sound principles and should be at the basis of all placement work for disabled soldiers.

A very natural tendency on the part of employers to discriminate against disabled men because of the increased cost of workmen's compensation insurance when numbers of disabled are employed has been overcome by the passage of a new workmen's compensation law. This law provides that if an accident to a disabled soldier while at work was caused by his previous disability, the compensation shall be paid not by the employer but by the national government. And if the man's incapacity for work after the accident is due in any part to his previous condition, only that part of the allotted sum which is compensation for the direct results of the accident shall be paid by the employer, the government being responsible for the rest. The government's share of the compensation is to be paid out of a fund raised by a tax on employers and insurance companies. Since accident insurance premiums will therefore not be increased to the employers of disabled men and since employers are taxed whether they employ the disabled or not, there no longer exists this ground for discrimination.

Belgian soldiers wounded in the terrible retreat from Liège to Dixmude were discharged from the hospitals in an even more broken and destitute state than their French comrades in arms. Frenchmen, all but those from the devastated districts of the north, had at least homes to which they could return. Their lot was pitiable enough in its helplessness and enforced idleness, but there was some comfort for them in the ministrations of their families and friends. Belgium, however, except

for the narrow strip of sand and marsh behind the bloody Yser, was all a devastated region; homes had been sacked and burned by the invader, families had been slaughtered and carried off into captivity. When a Belgian was of no more use in the army, he could be discharged, but he could not be sent home. He could only be turned adrift and left to work or beg his way along French or English roads. Often it happened that before men's wounds were barely healed, the hospitals where they lay were flooded by a new tide of wounded men from the front, and all who were able to leave were turned out. Belgian soldiers, therefore, were often unfit for work because they had not been able to secure the longer treatment which might have restored to them in some measure the use of injured joints and muscles.

It is said that two of these poor fellows, their clothes in tatters, their feet through their boots, but their breasts covered with medals for distinguished bravery in defense of their country, stopped at a certain house in Havre and asked for food. The house was that of the president of the Belgian House of Representatives, M. Schollaert, who himself listened to the men's stories. Shocked by the situation which he was thus able to image, M. Schollaert took them in and immediately applied to the government for permission to provide a home and medical care for these and other destitute soldiers. The manor-house at Sainte-Adresse in which he placed them and the staff he organized for their physical reconstruction became the nucleus of one of the two great institutions now providing re-education for Belgian soldiers.

The founder and director of this *Dépôt des Invalides* at Sainte-Adresse soon saw that he must add vocational

training to his program if he was to refit the men under his care for life and work. Workshops of a primitive kind were therefore installed wherever there could be found a place for them in the neighborhood. The brush-makers were set at work in the stable, the carpenters in a hired shed, and the shoemakers in the parlor of a villa. Later when the Belgian government lent its aid to the work, all the shops and dormitories were gathered together in portable wooden barracks in a vast cantonment.

Before the institution at Sainte-Adresse had passed through more than its earliest stages, the government realized that the disabled soldier problem could only be solved by more far-reaching measures. The first action then taken was the announcement by the Minister of War that soldiers who were unable because of their wounds to perform their former work would no longer be discharged at the end of their hospital treatment but would be sent to an institution where they could learn a new occupation. The next was directed at the men who had been previously discharged and who were now in distress in France and England. Agents of the Belgian government rounded up these men, revoked all their discharge papers, and subjected them to new physical examinations. Those that were found sufficiently able-bodied to be of use in the auxiliary services were taken back into the army; the others, unless they had secured well-paid, permanent employment, were sent either to a military hospital for further treatment or to Sainte-Adresse for vocational work.

It was then necessary to make the re-educational facilities of the nation—exiled though it was—adequate for training all men in the Belgian army who were or

might become incapacitated for their former occupations. To this end the government made grants of money to the institution at Sainte-Adresse and created the Belgian national school for disabled soldiers at Port-Villez. Both are on French soil: Sainte-Adresse just outside of Havre and Port-Villez about half way between Paris and Rouen. The two schools have a capacity for training over three thousand men.

Men are now sent to Sainte-Adresse or Port-Villez directly from the base hospitals at Rouen. If they need re-education, they have no choice but to take it. The compulsory character thus given to their training has been accepted without dispute by Belgians, though in other countries the idea has always been strongly opposed. Belgians have fewer counter-attractions in their lives than have other men. They are more cut off from the past, and they see no future until the invader is driven out. For these reasons, perhaps, they do not rebel at being kept in an institution and made to learn a trade.

But though training of one kind or another is compulsory, the individual can freely express his preference for this or that kind of work, and whenever he is not debarred by mental or physical limitations can take up the kind he desires. Often, however, a man who is cut off from his old occupation can fix upon no other, and the school authorities must then help him to choose. In this matter of choosing a trade—which is, in fact, one of the most important steps in the whole process of re-education—the Belgian schools follow a notably good course. Every man on his arrival undergoes a thorough physical examination, which determines what kind of work he is physically capable of and from what

he is barred. This is followed by a mental examination designed to bring out the extent of his previous schooling and his general intelligence. Next, he is taken on an informal tour of the shops, during which he can talk with the workmen in the different trades and discover perhaps some latent taste. The several examiners then compare their notes on the man's aptitudes, talk over the matter with him very seriously, and finally place him in one of the shops. If after a week's trial the work appears to be unsuited to him, his case is opened again, and a new start is made.

Rarely does it happen that there is no work suited to a man's tastes and capacities, for the Belgian schools teach a very great variety of trades. The woodworking trades, the metal trades, the leather trades, all branches of printing, various farming specialties, and numerous other callings—at Port-Villez, over forty in all—give the individual a wide field for choice.

In most of the shops the aim is to produce salable articles as well as to teach the trade, but good teaching is never sacrificed for the sake of production. Large orders, for example, are filled for the army supply department, but whenever the foremen think it necessary to give greater variety to the men's work, there are interspersed private orders. No order is accepted unless it can be utilized for instruction.

Good teaching is a harder problem in the re-educational school than in a regular trade school owing to the fact that new pupils are arriving all the time instead of at the beginning of a term. To overcome this difficulty, the Belgian schools use an excellent system of group instruction. Recent arrivals in a shop are put together and started at the first processes of the trade

under the guidance of a more advanced workman. At regular intervals, since different beginners will inevitably progress at different rates, they are regrouped according to their abilities. In some shops there is a monitor for every four workmen.

As a supplement to the practical work of the shops all the men learning trades receive some theoretical instruction. Through this they learn the principles of construction of their tools and machines, the properties and sources of their raw materials, how to determine the sale price of their products, and how to place them on the market. Wood and metal workers attend classes in draughting, not to become draughtsmen, but so that they may be able to read blue prints. In addition, every man receives some general schooling.

Commercial courses are given to fit men for civil service and other office positions, and there is a normal course for those who wish to become teachers.

After the Belgian government had so amply provided for the artisan and commercial classes among its disabled, it determined to complete its duty by giving to young men whose professional studies had been broken off by the call to arms an opportunity to continue their education. Since a university, unlike a trade school, could not be created overnight, these young men were sent to Paris, where they are lodged and boarded at the expense of the Belgian government while they study at the great Paris schools. The instruction has in most cases been made a free gift to them from the schools. Their books and instruments have been furnished by the Belgian Minister of Arts and Sciences.

As all men in the Belgian re-educational schools are still nominally soldiers, they receive besides their main-

tenance their soldiers' pay, but no pensions. If they are productive workmen, they also receive wages, a part of which is saved for them against their departure from the school.

In Italy as in the other allied countries all aid for the disabled soldier is based on the new principle that it must be aid through work. The old idea of giving the disabled soldier a pension and some soft government post was in 1914 still strong in Italy, where the war of the *Risorgimento* had been followed by much the same kind of pension legislation and veteran preference as our Civil War. Soldiers crippled in the struggle for *Italia irredenta* confidently expected to be treated as were Garibaldi's veterans, and to receive some comfortable sinecure in the postal or telegraph system or at least in the government sale of salt or tobacco. The new idea has, however, prevailed, and in 1918 all wounded soldiers in the Italian armies are offered something better than the means of living in idleness, namely, the chance to learn a useful trade.

The Italian law is that all crippled soldiers shall remain in the orthopedic hospitals until they can profitably commence their re-education. They are then dismissed from the hospital on a month's leave and allowed to visit their homes. At the end of the leave, unless they are plainly not in need of re-education or are too hopelessly crippled to benefit from it, they must report at the nearest re-educational school. They are required to stay in the school only two weeks, not long enough of course to make more than a beginning at learning a trade, but long enough to understand what re-education is and what benefits it holds out to them. They can

then make their own decision as to whether they wish to continue or to return to their homes.

The schools of which the government now makes use in its scheme for universal re-education were founded by private means and remain under the management of local committees, but are controlled and in part supported by the government. Thus in Italy as in France the work was begun by private initiative and only later coordinated into a national system. Government control is exerted through an appointed National Board for the Assistance of Invalided Soldiers, similar to the French National Office. This Board inspects and supervises the work of the schools, grants charters to new committees, and revokes the charters of those that do not come up to the standard.

The first local committee was formed at Milan, and the Milan school became the model for others as the Lyons school was in France. Rome, Florence, Naples, Genoa, Bologna, Palermo, Venice, and other cities followed suit as soon as the growing interest in the new gospel had aroused the citizens. In most of the northern provinces the formation of committees has been spontaneous, but public opinion has been slower in the south. In some regions the National Board has been empowered to call on the Mayors of towns to organize schools for district needs. It appears that unless the re-educational facilities of the country as a whole are increased, the law providing that all crippled soldiers shall spend at least fifteen days in a school cannot be put into effect.

The outward surroundings of the schools have usually their full share of Italy's gracious charm. The buildings are often fifteenth century palaces which have been

donated to the committees, or they are ancient convents surrounded by gardens, or stately public buildings fronting on picturesque piazzas. Within, the atmosphere is formal and institutional. Hours for work and recreation are all carefully regulated, and the plan of work is inelastic. Military discipline is enforced. At graduation there are usually speeches and prizes given either by the committee or by interested citizens of the town, for the naive Italian peasant has his interest greatly stimulated by such ceremonies. Every man receives also a certificate stating his fitness to follow a trade.

While attending the school the men are supported by the government, that is, the government pays the school a fixed sum for their maintenance. The government also pays the men their regular soldiers' pay and gives their families the same allowances as when the men were in active service. The period of training during which the man and his family are thus supported is limited to six months, but the National Board, if it wishes, can keep the man longer at the school at its own expense.

The courses in the Italian schools have been determined largely by the needs and limitations of the pupils. Eighty per cent. of the invalided soldiers, ninety per cent. in some provinces, are peasants with no experience in trades and very often illiterate. The great opportunity of the schools therefore has been to give these men a rudimentary education and in so doing to open up to them a new world. In many of the schools men are allowed to take up trade or business training only after they have completed the elementary and intermediate school courses. The business courses train the less intelligent among the pupils to fill such simple positions as concierge or store clerk; men capable of more,

they fit to be stenographers, bookkeepers, and bank and office clerks. There are special courses for postal and telegraph employees which are very popular with the men since they lead to government positions, but openings in this direction are rapidly being filled, and a strong effort is now being made to divert men to the trades and to agriculture.

The trades taught at Milan are carpentry, tailoring, shoemaking, basketry, leather work, wood inlay and wood carving, the making of wooden shoes, saddlery, broom and brush making, and mechanics. In general the same trades are taught at the other institutions, although critics have pointed out that training which is profitable at Milan, an industrial center, is little suited to the rural southern provinces. Not even a tailor or a shoemaker is greatly in demand in primitive villages where the inhabitants go ragged and barefoot. The chief need in these regions is for agricultural education, and the schools are now being urged to organize farm training wherever possible. At Palermo, where agricultural courses were started early, extremely worthwhile results have been obtained from instructing the ignorant and conservative Sicilian peasant in modern agricultural methods. Knowledge of this kind will economically more than compensate a wounded peasant for his physical handicap.

In some districts in Italy famous old handicrafts still flourish and bring high pay to a skilled worker. A cripple can very well work at such a craft if his injuries are not of the arms or hands, and so a number of the schools have courses in these skilled trades. Several teach bookbinding, which in Italy is still regarded as an art; others, fine cabinet-making or art pottery. Florence

has its famous toys, and Venice teaches the old Venetian arts of wrought iron and stamped leather.

All the schools have employment committees which are assisted in their work by a central placement office. Many of the men of course go back to their own village and set up their shop in their house. In cases where they go to the large cities employers have been found generally anxious to help: the Electro-Technical Society, for example, has made a list of the positions it can offer to cripples and the injuries compatible with them. Private firms are obliged to reinstate their employees crippled in the war if the employees can pass the required physical tests. Accident insurance companies are not allowed to increase their rates to employers of war cripples unless more than a certain proportion of the employees are disabled.

CHAPTER XIV

KINGDOM AND DOMINION

WHEN England sent her first "contemptible little army" to the continent in defense of the violated rights of Belgium, it was followed not alone by more Britishers but by troops from every corner of the globe. In every dominion of the empire troops were enlisted to "fight for the right" as the home country had seen it, and were dispatched to the front as fast as circumstances allowed.

Great Britain and every one of her dominions, in consequence of their heroic stand for the benefit of civilization, have had to face the problem of the returning disabled soldier. In the solutions attained by these commonwealths, dealing as they have with Anglo-Saxons, men of similar traditions, habits, and impulses as ourselves, the United States must find peculiar interest and derive unusual profit from the showing of their experience.

When the first British disabled began to return to the streets of London, there was scant provision for their care.

Now to every British soldier who lies in the hospital ward three possibilities are open—a visit from the dark-winged Messenger, a period of convalescence and the buckling on again of the sword for another thrust at the Hun, or "Blighty," the old familiar haunts, an economic crutch in the shape of a pension, and a job suited to his physical limitations. As surely as the stricken deer seeks the familiar glades so does the discharged warrior

turn his halting steps to the sheep downs of the south or the smoky towns of Lancashire, the heather hills of Scotland, the mines of Cardiff, or the long, long way to Tipperary.

If we could visualize the procession of maimed and disabled men in mufti as it leaves the discharge depot we would see it melt away into the economic horizon of every portion of the United Kingdom, to carry to each county, borough, and town the problem of the care of the disabled man as a legacy of the Great War for the stability of those free institutions the Anglo-Saxon prizes above life or sound limbs. And in each and every district he will find that provision has been made to continue his medical treatment, choose for him an occupation suited to the abridgement of his powers, and induct him into it after proper training. Should he be in doubt as to his rights under the new and unusual laws of the realm, the Local Pensions Committee stands ready to secure his rights, succor his family, and educate him to surmount the handicap the enemies of civilization have laid upon him. And this, not because England thought this out as the best way to care for her disabled heroes, but because it chimed in with her way of doing things in the past. Local government has always been a cherished prerogative of the English commonwealth since the days of the petty kingdoms. A representative government may sketch its plans in the large, but the English community must be given a free hand in filling in the local details. So when the Disabled Sailors' and Soldiers' Committee reported to Parliament in 1915 that "the care of the sailors and soldiers, who have been disabled in the war, is an obligation which should fall primarily upon the state" and that body passed the Naval and

Military War Pensions Act in 1915 to provide for "the care of officers and men disabled in consequence of the present war," the plan proposed to commit the disabled man to the care of a local committee of his own townsmen. To be sure, later developments of the plan necessitated modifications of this scheme in the interests of coordinated measures for the economic welfare of the realm, but this is essentially the genius of the English plan—local responsibility for bringing the opportunities afforded by the government to the door of each disabled man.

Specific instances of like care were not wanting. The Incorporated Soldiers' and Sailors' Help Society, which was established under royal patronage at the close of the South African War, had sought to aid the ex-service man in finding employment by furnishing him with the name of a "friend" in each parish or ward throughout the empire. The Old Age Pensions scheme of the state was administered by local committees in every borough and urban district having a population of 20,000 or over. The necessities of the families of the enlisted men had long been looked after by the Soldiers' and Sailors' Families Association by a ramification of local committees composed largely of clergymen and ladies of leisure in all parts of the country.

It was quite natural, therefore, that Parliament should look to a local committee to take the hand of the disabled man and lead him all the way back to a life of productive and contented activity. It was thought that the necessities of each man could best be assessed and provided for by a committee of his townsmen familiar with the conditions that environed him and his family. The soundness of this principle cannot be questioned, and

while it may not make for uniformity it at least has the advantage of intimacy. It is the recognition of a principle, expressed many times in Parliamentary debate and charity organization, that in dealing with individuals in widely differing stations in life and with peculiar necessities, a human element must somehow be provided which the uniformity of governmental regulations does not permit. The human element—a quick sympathy, an intimate knowledge of a disabled man's circumstances, a way to help unfamiliar to rules of a bureau—this can be supplied best by the local committees.

And so England followed the blazed trail of private philanthropic organizations and established Local Pensions Committees in every county, county borough, and urban district having a population of not less than 50,000. The committees are responsible to the Ministry of Pensions, which establishes rules and regulations to secure uniformity in the provisions they make for the men committed to their care. The appointment of these committees is largely left to the local authorities, but in general they must include some women, some representatives of labor, and members of the Soldiers' and Sailors' Families Association, and of the Soldiers' and Sailors' Help Society. A salaried secretary appointed by the Ministry of Pensions is a kind of liaison officer between the local body and the central office.

The duties of the Local Pensions Committee are broadly sketched in the instructions of the Ministry of Pensions: "The local committee should regard themselves as responsible for all discharged men of this class (*i. e.*, disabled) living in their area. They should make it their business to get in touch with every such man, whether or not he has obtained employment or occupa-

tion since his discharge, and see that the treatment or training which his condition needs is secured for him when he needs it. . . . It is vitally important both in the man's interest and in that of the Nation that any case which needs either treatment or training should be taken in hand at once. Local committees must not be content with dealing only with the men who happen to present themselves to them for assistance; they must see that they have information as to the condition of all discharged pensioners in their areas, and make it a point of getting in touch with them directly they are discharged."

The committee is to be guided in its decisions in regard to suitable training for a man by several considerations. His previous occupation must have weight. The proposed occupation must be suitable to his age, disablement, and physical condition. If any recommendation as to his training has been indicated on his notification of award for pension or by a hospital visitor, this must be considered. Not least of the factors entering into a solution of the problem before the committee must be the opportunities for a living wage in the occupation chosen for him.

It must be quite clear that if the local committee were left to its own devices wholly in choosing an occupation for the man the result in the field of industry might be disastrous. The influx of a large number of disabled men into a particular occupation without some standard of training might arouse antagonisms that would be unfortunate. This necessitated some rulings by the central office in the interests of coordinated effort. Both the employers of labor and the work people must have some voice in the matter, especially in a country whose labor

organization has made such strides. The necessary machinery was provided by the Ministry of Pensions cooperating with the Ministry of Labor. Trade Advisory Committees have been appointed for most of the principal trades. Each committee is composed of an equal number of employers and work people. It is the duty of each committee to advise the Ministry of Pensions as to conditions under which the training of men in that trade can best be given, the best methods of training, the suitable centers for it, and in general to secure uniformity in the training. The numerous reports already issued contain a valuable fund of information regarding the trade from the viewpoint of the man who is physically handicapped. The analysis of an industry with the man with abridged powers in view is a phase of industrial efficiency which the war has developed. Never again can the old *laissez faire* policy of allowing the handicapped man to stumble along the industrial road undirected and unassisted prevail. Society cannot again close its eyes to this waste of human efficiency and the heartbreak of the man whose work powers are unappreciated because of some physical abridgement he has suffered.

The question of wages to be paid to a disabled man will always be a vexing problem. Where a disabled man can do his full stint of the work and compete with his normal fellows, he should plainly receive the equal wages whether he is receiving a pension or not. But there are grounds for debate when the man is physically unable to perform a full task either in hours or output. The inevitable tendency will be for the employer to depreciate the man's ability. The exploitation of the disabled man, especially when he is receiving a pension, is feared by organized labor, jealous of its wage standards. An

effort has been made to provide machinery for obviating this difficulty. The Ministry of Labor has set up in the principal industrial centers advisory wages boards composed of representatives of employers and work people and three members of the Local Pensions Committee. This committee is to advise the local committee, or an employer desirous of employing a handicapped man, what would be an equitable wage in his particular case, taking into consideration the man's physical capacity and the current rate of wages for the industry in that locality. The question of a man's pension is not to be taken into account. The committee acts purely in an advisory capacity, but it is hoped by these means to provide against the exploitation of cripples or the lowering of trade standards.

It is the duty of the Local Pensions Committee to provide facilities for the training of its disabled ex-service men. It was soon seen that the training facilities of a larger area than that within the jurisdiction of most local committees must be made available if the variety of occupations demanded were to be provided. So Joint Advisory Committees, composed of the representatives of local committees, were formed in 1916 to arrange comprehensive schemes for utilizing the facilities for technical education within whole counties or groups of counties. Twenty-two of these joint committees were formed in the United Kingdom. They surveyed the technical facilities in their respective districts and syndicated them in the interests of all.

For many years the British government has aided local technical schools, and the result has been a surprisingly large number of institutions where one or more trades are taught. These trades cover the principal

industries of the country. The number of technical schools in the industrial counties of Lancashire and Yorkshire is particularly noticeable. Both of these counties formulated ambitious schemes for the training of disabled men in every variety of industry pertaining to the soil, the mine, the factory, and the sea. The co-operation of all the principal technical schools in the training of disabled men was secured. The offer of facilities seems to have greatly exceeded the demand.

Not only have the technical schools been utilized for re-education but many men have been trained directly in workshops and factories. The plan advocated by several of the trades advisory committees provides that a man shall spend part of his time at a school and part of his time in actual work in a factory or workshop. By this means a balance is maintained between the theoretical and the practical.

It must not be supposed that every man returns to his home district absolutely unprepared for an altered industrial career. Many of the men avail themselves of the opportunities afforded by the workshops connected with the hospitals in which they have spent their period of convalescence. Early in the history of the war curative workshops were established in the hospitals of Roehampton and Brighton, whither men who have suffered some amputation are sent. Major Mitchell, the director of one of the leading technical institutes, was chosen to direct the courses. The therapeutic value of manual work has been fully recognized, and many a man, invited to busy himself in a workshop with the tools of a man's job ready to his hands, has not only found a stimulus to the functional activity of injured members but has actually learned a trade while waiting for nature to

heal his wounds and the government to furnish him with an artificial limb. Not every man avails himself of the opportunities offered him in the hospital and must look to his local committee to furnish the opportunities for training he slighted or to supplement his training by continuation courses.

Upon his discharge from military service the disabled man is granted a pension based upon the degree of physical disability he has suffered and is free to return to his home locality. His future lies within the advisory jurisdiction of his Local Pensions Committee acting for the Ministry of Pensions. He may choose to live a life of inactivity depending for a scanty subsistence upon the slender stipend granted him by the Ministry of Pensions. He may accept a job ready to his hand, because of acute industrial conditions caused by the war, from which he is likely to be ousted by the return of able-bodied men upon the demobilization of the army. Or, he may accept training at the expense of the state and become a skilled worker with better prospects of continued employment when normal times return. The good sense of the man and the persuasiveness of the local committee will largely determine what course he is to pursue.

If he elects to take training he will receive, during the time required for his re-education up to six months, his total disability pension together with a family allowance, all necessary fees will be paid for him and at the end of his course he will receive a bonus for each week of training. The state cares for both himself and his family during his period of re-education. At the end of his course he will be fortified against the exigencies of the future by the wages he can earn at a skilled trade

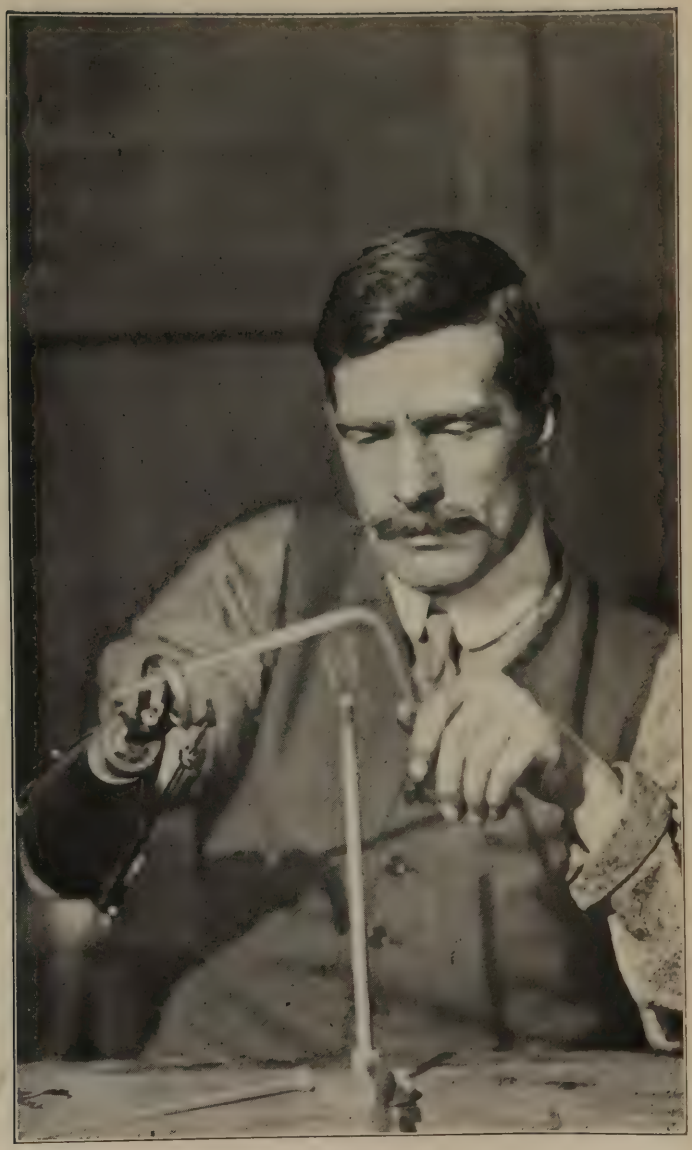
and the regular pension to which his injuries entitle him. It is expressly stipulated that his pension shall never suffer diminution because of his increased earning capacity. Many disabled men are now receiving from this dual source larger incomes than they enjoyed before they entered the service of their country.

The demand for disabled men who have received training has been so great that no difficulty has been found in finding employment for them. The admirable system of state labor exchanges provides the facilities for placing disabled men in industry and their services will be in still greater demand when peace returns and conditions of employment are greatly altered by the return of men from the front.

While the preparation of disabled men to enter into competition with their normal fellows seems to promise the best results on the whole, still it must be recognized that many men with severe physical limitations must be provided for in special institutions under favorable work conditions. Specialized machinery and carefully planned team work can make productive units of badly handicapped men with whom the average employer is not willing to bother. Large provision for this class of men has been made by the Lord Roberts' Workshops, which are being multiplied in different parts of the country. Some ten years before the war the Soldiers' and Sailors' Help Society opened workshops in London to provide employment for disabled ex-service men for whom it was extremely difficult to find work. The work has been greatly expanded since the war, and the enterprise has taken the name of the nation's military idol, who was greatly interested in the project. Toy-making, with the many processes involved, has been found a suitable in-



Still in the National Service. Making submarine fittings



A Wage-Earner Once More. The loss of a right arm does not prevent this British soldier from doing useful work in a laboratory

dustry for many types of disability, and the enterprise has been successfully conducted on a sound commercial basis. The plans of the society contemplate facilities in the eleven workshops in different parts of the country for the accommodation of between four and five thousand men.

Great Britain's colonies have, one by one, followed the trail blazed by the pioneers of re-education and are now admirably equipped to offer training and employment to the disabled soldiers of their own forces. Canada, Australia, New Zealand, South Africa, and India all are now prepared to receive from the battlefields those whom they sent forth, to fit again for civilian pursuits those whom war has maimed.

Great credit is due our neighbor on the north for her promptness in making provision for her disabled men. When the ambulance transports landed the first few bands of disabled Canadians at the clearing depots in Halifax, St. John, or Quebec, there were medical boards to examine them, and hospitals on wheels to carry them comfortably to their military districts. After a short stay at home the soldiers are expected to report back to the military convalescent hospitals named in their passes. Then their physical rehabilitation begins.

In the hands of the Invalided Soldiers' Commission, an outgrowth of the Military Hospitals' Commission, are the duties of re-educational work and vocational training in Canada, whether provided for men undergoing treatment in military hospitals or after discharge.

Those Canadians who have given an arm or a leg in service are fitted with artificial limbs in Toronto, where a government limb factory has been established. The fitting of limbs is done in a branch of the Military Ortho-

pedic Hospital at North Toronto, and local branches for fitting have recently been established at several points. The leg made in Canada is of the standard American type. For men who have been discharged from the hospitals, artificial limbs are provided free, and arrangements have been made by which the government will keep them in repair.

To those of her men who are prevented by their disabilities from resuming their former occupations, Canada offers special training in a new trade at the expense of the Invalided Soldiers' Commission. While the soldier is still in the hospital, his future is discussed with him by a vocational officer, and a plan of action is decided upon. The man comes up before the Disabled Soldiers' Training Board, which consists of the district vocational officer, a special medical officer, and a representative of the local employment organization dealing with the problem of placing returned men in industry. This board determines the man's eligibility for training under the regulations and the occupation for which the man is to be trained. The place of training, length of course, method, and cost are determined by professional members of the staff of the Invalided Soldiers' Commission. The plan is then recommended to the authorities of the commission at Ottawa. Should there be no objection, the man's re-education is begun.

The disabled soldier is given an opportunity to change his course of training, if it is found that the original choice was unhappy. The man approved for re-educational training is given a pension and a vocational allowance, also an allowance for his dependents, so that he is relieved of financial worry while he is undergoing instruction.

At a typical Canadian school of re-education, the men attend as day pupils, receiving instruction in machine-shop practice, gas-engine operation, automobile mechanics, electric power station practice, railroad or commercial telegraphy, surveying, architectural drafting, the manufacture and repair of artificial limbs, shoe-repairing, moving picture operating, steam engineering, heating plant operation, electrical work, civil service, commercial courses—bookkeeping, accountancy, stenography, typewriting, secretarial work for municipalities—cabinet-making, sanitary inspection, meat and food inspection, to be instructors in vocational subjects, wood-working, and machine operation. On a prairie, several miles out from the school, men are taught to operate gas tractors, with which they plow up virgin soil, and do a hard day's work as they would under actual employment. There are also classes in mathematics, English, and civics.

The best schools and courses will not benefit the disabled trainee unless he has the right teachers and unless there is a real bond of friendship between the individual man and the vocational officer. The teachers sought are skilled men with wide experience, rather than pedagogues. Those most desired are competent men who have seen military service overseas, physically handicapped civilians, or civilians not eligible for military service. Instructors are not in uniform, but serve as civilians.

Some men are placed for training in factories, under a modified apprenticeship system. Their instruction is carefully supervised by a visiting inspector, and the progress made is recorded and checked up. This method of instruction is meeting with more and more favor in Canada, and the results have been exceedingly inter-

esting. The men thus placed receive no wages—unless the employer voluntarily pays them as the training progresses—but receive from the government the same benefits as to pension and training allowance as the men re-educated in schools.

By arrangement with the various provinces, it was agreed that the Commission reserved the right to place in employment graduates of the re-educational system, while men able on return to Canada to re-enter civil life without training were to be placed by provincial commissions. There has been put into force since the beginning of 1918 a system of placement and follow-up for men completing courses under the Invalided Soldiers' Commission. Complete records show where men are employed and the wages they are earning. Some of the figures, for example, comparing wages before enlistment and after re-education show that the increase in earning power of the first hundred men graduating in Montreal —pension payments not being taken into account—averaged fourteen per cent.

Australia calls her work of refitting disabled soldiers for civil pursuits "repatriation." At first, as in England, private agencies assumed the burden of caring for returned fighters. Later, when Australians began to come back from the battlefields in increasing numbers, the government recognized its duty to them by passing in September, 1917, the Australian Soldiers' Repatriation Act. This act placed the control of repatriation in the hands of a commission consisting of seven members. In the capital city of each state local boards were created to act as agents in carrying out the plans of the commission.

The mere passage of the measure did not assure the carrying out of the scheme for restoring disabled men to

self-support. At first, a soldier was registered at the repatriation office only when he applied there for help. Under the act, the first task of the repatriation commission, according to Senator Millen, would be to register the condition and requirements of all returning soldiers, either on the transports or before they left England. This early registration would give the commission some idea of the number of men they had to deal with, their needs, wishes, and qualifications.

For those whose disabilities prevent them from securing employment without re-educational training, the government plans to provide preliminary training in curative workshops attached to the hospitals, and then more advanced training. Such work has been launched in the hospitals at Sydney and Melbourne.

To meet the needs of the first amputation cases, Australia was forced to import artificial limbs from England, an unsatisfactory procedure at best. Later, the Surgeon General of the Defense Department established limb factories in Melbourne and Sydney. To start the first factory in Melbourne, an American expert was called in.

Under the act, a number of Local Committees were created to act as local agents for the Department of Repatriation in regard to placing of men in employment. Various labor branches were formed to carry on the routine work of the ordinary private labor agency, and to inform the department as to returned soldiers in their districts wanting work and as to vacancies requiring men to fill them. Great effort is being made by the Repatriation Department to list employers who promised to re-employ returned soldiers and to canvass the field for employers who are willing to take on disabled men.

The regulations under the Repatriation Act, effective April 8, 1918, authorize the creation in each state of a Soldiers' State Industrial Committee, for the purpose of facilitating the training of men in private industrial establishments. The former committee has power to decide disputes arising from decisions made by the latter.

A Soldiers' District Industrial Committee, consisting of a chairman appointed by the Minister, two representatives of the employers in the trade of the trainee, and two representatives of the union covering the trade or calling of the trainee, have these powers: (1) to consider opportunities for employment of soldiers or their dependents; (2) to decide after trial as to the suitability of applicants for particular callings; (3) to assess the efficiency of the trainee after the commencement of his training; (4) to re-assess the trainee's efficiency every three months; (5) periodically to review the facilities for training in workshops and technical schools; (6) to deal with disputes between persons entered for training in private workshops and the employer, in particular disputes arising as to what is the ruling rate of wages in any industry; and (7) to have power when necessary to call for and take evidence.

In his speech before the Senate on May 2, 1918, the Honorable E. D. Millen, Minister for Repatriation, pointed out that since it was not possible to find employment for all disabled men in the ordinary channels of industry, it would be necessary to find "reserve employment." An arrangement was made with state governments by the federal authorities to grant the states as a gift an amount of money to make up the deficiency caused by the employment of such men as could not give the full day's work in return for the full day's wage

of an able-bodied worker. For instance, if the full wage paid be 10*s.* per day, and the returned soldier employed can earn no more than 8*s.* in the day, owing to some little incapacity, the difference of 2*s.* will represent the measure of his inefficiency, and the Repatriation Department will make that good by a gift of the amount to the state governments concerned. Several state governments have made arrangements to employ men on such terms in afforestation.

Those of New Zealand's men who have gone to the front are assured of the best possible provision for their successful re-entry into civilian life upon their return. The whole problem of the returned New Zealander is in the hands of the Discharged Soldiers' Information Department, which has established a network of local committees that assume the responsibility of finding suitable employment for the men in his own community.

Especial effort has been made to get in touch with every returning soldier to ascertain his situation and his needs. Representatives of the Department board the incoming transports, or arrange to secure from the military authorities on board ship the necessary data concerning each man. This information is recorded on a card in the central register of the Returned Soldiers' Information Department, and word is sent informally regarding the home-coming man to the community to which he is to return.

The duty of interviewing the discharged soldier is often delegated to local police officials, who are cautioned to make their inquiries sympathetically and tactfully. The interviewer takes with him a blank report to fill out and also a circular of information for the soldier.

If a man does not require the department's assistance,

the interviewer obtains his signature to that effect. Many of the men do not require assistance, as they may have business or farms to return to, or may have sufficient private means. Others may have obtained employment or promises of employment.

The man who desires employment is instructed to get in touch with the local committee in his home district.

For disabled men who cannot return to their former occupations free tuition has been offered in various fields. On the state farms, men are taught various branches of agriculture. At Lincoln College, Wellington, where free scholarships are offered in scientific agricultural training, those who desire clerical training are instructed by the New Zealand Society of Accountants. In addition to classroom teaching, correspondence courses are maintained for those who cannot attend in person.

At Wellington Technical College instruction is provided for disabled men in building construction, decoration, painting, carpentry and joinery, plumbing, machine work, jewelry making, metal work, plastering and modeling. Other centers provide different courses of training.

To remove any financial difficulties for men desiring to take training, the government decided to grant to ex-soldiers attending classes a maintenance allowance of not more than one pound a week, irrespective of pension payment. This allowance is conditioned upon the man's good conduct, regular attendance, satisfactory progress, and suitability for the chosen trade.

Despite New Zealand's persevering efforts to provide suitable training for her disabled men, the results have not been encouraging, for comparatively few men have availed themselves of the opportunities offered. The

results in obtaining employment for disabled men, however, have been exceptionally successful. This may be due in some part to the abnormal demand for labor in New Zealand at the present time and to the desire on the part of most of the returned soldiers to get back as quickly as possible to remunerative and productive employment.

A school of re-education in India is indeed a new thing under the sun. To teach disabled soldiers of the Indian forces such trades as motor mechanics and tailoring in order to make them self-supporting must appear wonderful to us who have been accustomed to regard the hordes of mendicants in India as a natural element in that country's curious make-up.

At Bombay is one of the most picturesque schools in the world. Queen Mary's Technical School for Disabled Indian Soldiers it is called, founded over a year ago by Lady Willingdon, wife of the Governor of Bombay. Here there are hundreds of India's returned fighters, men from all ranks and castes, working zealously under competent instructors who teach them trades that range from poultry raising and farming to tailoring, motor mechanics, engineering, carpentering, motion picture operating, and oil engine driving. For six months or more these olive-skinned, curly bearded trainees work in the shops until they are "graduated" and sent out to trades at which they can earn from twenty to one hundred rupees a month, or about six to thirty-two dollars. Not a great income, perhaps, but sufficient in view of the fact that the average man in India can live comfortably on about six dollars a month.

The building itself is at Byculla. It is splendidly appointed with sitting-rooms, dormitories, and work-

shops, and is surrounded by beautiful grounds where the pupils take their exercise or spend pleasant hours conversing or reading. Spacious verandas afford them ample space for games and amusements. In the well-ventilated dormitories each man has beside his bed his own lockup in which he keeps his personal belongings.

Queen Mary's School affords the men every opportunity to take their training in comfort and without financial worry. Clothes, bedding, and food are supplied. To those who have to come from a distance return railway tickets and traveling expenses are given. When a man finishes his course, he is supplied free with a set of tools for his trade.

Trained men are placed in Bombay and other industrial centers in workshops and factories; with regiments or the army clothing department as tailors; in the mechanical transport service as chauffeurs; in the government dockyards, ordnance factories, and arsenals as turners, fitters, machinemen, engine drivers, and ammunition box makers.

Artificial limbs are furnished to cripples at one of the hospitals in Bombay, while in hospitals at Dehra, Dun, and Mussoorie reconstructive medical treatment is provided for the benefit of disabled men.

In addition to the employment department of the Queen Mary's Technical School there have been formed at the various centers in India bureaus that take care of the problem of placing disabled men in suitable employment.

In Richmond Park, Surrey, England, on a magnificent twelve acre site, stands the South African Military Hospital, especially built for permanently disabled South African soldiers. The South Africa Union, without facili-

ties for carrying on the necessary work of re-education, found it advisable to establish on British soil a hospital and training center for the disabled men of her own forces.

Nothing is left undone to make the disabled soldier feel at home in his new quarters in Richmond Park. Corridors and patients' departments of the hospital are designated after familiar places and streets in South Africa. Thus, the main entrance opens into "Adderley Street," leading into "Market Square" in Cape Town, while the corridors are named "Commissioner Street," "Maitland Street," and "Sunnyside." The hospital buildings were designed to resemble South African colonial timber-framed dwellings of a type familiar to the disabled man. The day rooms are named after well-known clubs, "The Ramblers," "The Wanderers, "and "The Dustpan." The majority of the beds have been endowed with money collected by school children in South Africa.

One of the hospital buildings is a large concert hall, used at times for church services, for entertainments for the patients, and for classes in typewriting, bookkeeping, shorthand, and motion picture operating. Adjacent to the concert hall and established in connection with the hospital, are the practical workshops or vocational training classes. Here disabled soldiers are taught to become metal turners and fitters, tool makers, brass finishers, coppersmiths, tinsmiths, engine drivers and attendants, acetylene welders, electrical fitters for power, light, telephones, and bells, cinematograph operators, electrical testers, meter readers, dynamo and switchboard attendants, sub-station and accumulator attendants, motor car drivers and repairers, carpenters and joiners, cabinet-makers, bootmakers and boot repairers, clerks, store-

keepers and timekeepers, bookkeepers, accountants, salesmen, secretaries, and managers. The vocational training staff consists of nine experienced instructors under an educational organizer. The workshops are registered by the city guilds and the classes are inspected periodically by experts.

When a man enters the hospital he is classified under one of three headings: (1) likely to become fit for further military service; (2) doubtful if he can be fitted for further military service; or (3) unlikely to be fit for further military service. If he falls under one of the first two classes, he is given curative treatment only, to return him to active service as soon as possible. If he comes under the third heading, his case is investigated to determine whether he will require vocational training. If it is found that the does, he training is begun as early as possible.

The hospital and vocational staffs cooperate as closely as possible, for it has been found that the interest of the disabled soldier can be stimulated in some type of work long before he is well enough to leave his bed.

According to Lieutenant-Colonel Thornton: "Under the South African scheme the men start earlier than in any other institution in the United Kingdom, as this hospital is the only primary hospital which has Vocational Training Classes established in connection with it." This statement strikes the keynote of the South African plan. The fact that work is going on about him tends to hearten the disabled man; he is led to believe that he, too, can learn a trade. His training is begun gradually, under strict medical supervision. As soon as he is able to sit up in bed he is given typewriting or some light

recreational work to do. This fosters the desire to continue a course of training.

The injured man is not compelled to take the training. He is advised by the doctor and by the vocational staff to attend the classes, but there is no penalty if he refuses. The choice of a career is settled upon at a conference of a doctor, the educational organizer, and the patient himself. The disabled man's own inclination, his physical disability and his suitability for the calling from medical and educational standpoints, are the determining factors in deciding his career.

It is the rule at the South African Military Hospital that no man is kept a day longer than is necessary for his medical treatment. After his discharge he is kept as an out-student, and can receive further medical treatment as an out-patient.

Upon discharge from the hospital, the men are not discharged from the army, but are kept as Union soldiers in hostels close to the hospital, and continue their training in the hospital workshops. The men are uniformed and subject to military discipline. A man may or may not undergo training as an out-student just as he chooses, but if he does take the training he must obey military orders.

Most of the students acquire sufficient training at Richmond Park to ensure them good livelihoods in South Africa, but wherever possible they are placed in workshops in England for several weeks prior to their embarkation so that they may get practical experience under actual working conditions. During their stay at Richmond Park the men receive, instead of pay or pension, certain allowances from Union funds. It has been estimated that over ninety per cent. of those for

whom re-education would be appropriate undertake the training.

The problem of reinstating the returned man in civil life in South Africa has been placed by the Union government in the hands of the Central Committee of the Governor General's Fund, and the whole Union has been divided into districts with a local committee in charge of each area. On these committees rest the responsibility for finding employment for returned soldiers.

When a man is committed to the workshops, a full report is prepared as to his previous employment, physical disability, and the trade for which he is to be re-educated. This is sent to the Union government with copies for the committee for the area in which the man desires to live upon return to South Africa. Copies of progress reports on each case are sent from time to time to these committees, so that they have complete information well in advance and should thus have little difficulty on his return in finding for him suitable work. In fact, students are often notified prior to their return that there has been found for them employment upon which they can enter immediately after their arrival at home.

CHAPTER XV

ACROSS THE FIRING LINE

PREPARED as she was for war, so also was Germany prepared for the consequences of war. At the outbreak of the war, she had of all other countries laid the most solid foundation for the care of the crippled soldier. The German national Federation for the Care of Cripples is an organization of long standing. There had been developed, during half a century's experience, fifty-eight cripple homes, under private auspices, ranging in size from six to three hundred beds. Some of them were already taking adults as well as children, and they had among them 221 workshops, teaching 51 trades. In addition, there were sanatoria and re-educational workshops for industrial cripples under the employers' accident insurance companies; there were orthopedic hospitals operated by municipalities, and there were trade schools and employment bureaus under various government auspices.

All these resources accumulated in peace time for the rehabilitation of cripples were mobilized immediately after the outbreak of the war—almost simultaneously with the military mobilization. Eight days after the outbreak of hostilities, the Empress, at the instance of Dr. Biesalski, Germany's leading orthopedist and secretary of the national Federation for the Care of Cripples, addressed to existing institutions for the crippled a letter pointing out the necessities ahead and urging them to open their doors and provide facilities for the treatment

and training of disabled soldiers. To this all the homes immediately consented. Dr. Biesalski undertook a tour of Germany and visited the principal cities urging the formation of voluntary committees for the care of war cripples. The immediate result was the formation of volunteer committees in many cities and of larger ones in some states and provinces. At the present time, Germany is thoroughly covered by a network of such organizations. A local committee usually comprises representatives of the municipality, of the military district command, the accident insurance association, the Red Cross, the women's leagues, the employers, the chamber of commerce, the chamber of handwork, and the labor unions. In the fall of 1915, a national committee was formed with the object of coordinating the work and making investigations and plans for the future.

There are four stages in the treatment of the disabled soldier: (1) medical treatment; (2) provision of artificial limbs and functional re-education; (3) vocational advice and vocational re-education; and (4) placement. Of these activities, the first two are controlled by the imperial military authorities and are conducted on uniform lines. With regard to vocational and economic rehabilitation, on the contrary, there is no general direction given by any central authority; the re-education schools are of varying types and most unevenly distributed; the work is in the hands of local and private or semi-private agencies; it is done mostly by volunteers and is not even supervised by the imperial government.

However, in spite of the absence of any general system of organization, there is a complete unity of purpose and the work is everywhere carried on in accordance with certain universally accepted and officially sanctioned



The Enemy Conserves Man Power. Disabled



At Work Again—With Four Artificial Limbs. Germany sees to it that her disabled soldiers are prepared for self-support

principles. These were formulated by Dr. Biesalski in this way:

1. No charity, but work for the war disabled.
2. Disabled soldiers must be returned to their homes and to their old conditions; as far as possible, to their old work.
3. The disabled soldier must be distributed among the mass of the people as though nothing had happened.
4. There is no such thing as being crippled, while there exists the iron will to overcome the handicap.
5. There must be the fullest publicity on this subject, first of all among the disabled men themselves.

The possibility of rehabilitation is accepted as a creed by all the institutions working to this end, it is put in practice, and the statement is that in ninety per cent. of the cases the desired results are attained.

There is a fairly complete network of orthopedic homes distributed all over the empire. Their number has been put at about two hundred. They are all under military discipline. The time of treatment for a man in the orthopedic hospital is from two to six months. Men are kept here until they are ready to go back to the army or are pronounced definitely unfit for service. Even if they are so unfit, the war department does not discharge them until they are pronounced by the physician physically fit to go back to civil life.

The best hospitals are excellently equipped. Complaints have been made, however, that the remote hospitals have very incomplete arrangements and that the great demand for orthopedists leaves some places unsupplied.

More and more emphasis is being placed on physical exercise as a means of bringing disabled men back to the

standard. The plan is that a man shall begin very simple but systematic physical exercises even before he is out of bed. These are gradually increased until finally he has two or three hours a day under a regular gymnasium instructor. Games and outdoor sports are found to have an immense therapeutic value, both psychological and physiological, as compared with medico-mechanical treatment. Thus we find, at the different hospitals, as part of the regular régime, ball playing, spear throwing, bowling, shooting, quoits, hand ball, jumping, club swinging, and swimming. Finally, though the hospitals do not attempt to train a man to a trade, many of them have attached workshops for purposes of functional re-education. There is great emphasis placed on the fact that even this occupational therapy should be really useful and should lead the patient direct to some practical occupation.

All artificial limbs are furnished and kept in repair by the government. The government has prescribed maximum prices for prostheses of different types. Otherwise there is no official supervision. No standard pattern is prescribed, and the matter is left to the doctors and engineers of the country. The result is an immense stimulation of activity. The magazines are full of descriptions of new prostheses recommended by doctors and manual training teachers from all parts of the country. At an exhibition of artificial limbs, held at Charlottenburg, there were shown thirty kinds of artificial arms and fifty types of artificial legs in actual use.

The principle now thoroughly accepted is that the prosthesis should reproduce not the lost limb but the lost function. It should not be an imitation arm or leg,

but a tool. The standard of merit is the number of activities it makes possible.

Re-education in Germany goes on at the same time as the medical treatment. This has two causes. First, there is the strong conviction among all cripple welfare workers that results can be obtained only by getting hold of a patient at the earliest possible moment of convalescence, and second, the fact that, since the government does not pay anything towards re-education, it is more economical for the care committees to attend to it while the men are in the hospitals and thus save themselves the expense of maintenance.

The first civilian function in the care of the war cripples is vocational advice. The local care committee usually appoints vocational advisers, which appointments have to be sanctioned by the local military authorities, who control the visits to the men in the hospitals. As soon as a soldier is well enough to be visited, the committee sends a representative to get full data on his experience and his physical condition, and then advise him as to re-education or immediate return to work. The principle is fast held to that a man must, if humanly possible, go back to his old trade, or, failing that, to an allied one.

The trade training is given while the men are still in the military hospital, beginning, in fact, as soon as they are able to be out of bed. The workshops are maintained by the local care committees; they can be located either in the hospital, or at an outside point to which the men go every day. The first plan is followed by but a few of the larger institutions; in most instances there are no workshops maintained at the hospitals. The local care committee may utilize the local trade schools. There are excellent facilities for this, since every town

has at least one trade school. Some representative of the educational authorities generally serves on the local care committee and the schools are eager, in any case, to offer free instruction. German magazines are full of advertisements of free courses for war cripples, offered by schools of the most varying kind, public and private, from agricultural and commercial schools to professional schools and universities. On the other hand, in a large town, with a number of hospitals, the committee may create a school of its own. Thus, in Düsseldorf, for instance, where there are fifty hospitals, the committee has taken possession of a school building equipped with shops and tools and given twenty courses open to men from all the hospitals.

It is planned that none of the courses shall take more than six months, the maximum time for hospital care. These short courses are intended for men of experience who need further practice in their old trade or in an allied one. If a man needs further training after this short course, he becomes the charge of the local care committee, which supports him while he attends a technical school or pays the premium for apprenticing him to a master workman.

A special effort is being made to return to the land all who have any connection with it, such as farmers, farm laborers, and even hand-workers of country birth. All the hospitals which have any land give courses in farming and gardening for their patients. It is estimated that there are several hundred such hospital farms, small or large, operated by the wounded. In addition to this, there are definite summer farm courses at agricultural schools and universities, which are free to cripples.

There are in the empire ten regular agricultural schools for war cripples.

Since the one-armed man has one of the gravest handicaps, special arrangements have been made in several places for his training. The purpose of these courses for the one-armed is to accustom the soldier to exercise the stump and the remaining member, performing the daily duties such as eating, washing, dressing, tying knots, using simple tools, and the like. This is a preliminary to specialized trade training, and the process is said usually to require about six weeks.

An essential feature of the course is left-handed writing for those who have lost the right arm, not only for men in preparation for clerical work but for others as well. This training banishes to a marked degree the feeling of helplessness and likewise gives the hand greater flexibility and skill. German teachers have made a scientific study of this question and state that left-handed writing can be made as legible and characteristic as right-handed. Samples of left-handed writing from Nürnberg show excellent script after from twelve to twenty lessons.

Left-handed drawing, designing, and modeling are often added subjects of instruction. Men with clerical experience are taught to use the typewriter, sometimes using the stump, sometimes a special prosthesis, and sometimes with a shift key worked with the knee.

All the schools for one-armed put great emphasis on physical training. In the school at Heidelberg, under a regular gymnasium instructor, the men do almost all the athletic feats possible to two-armed men.

There is no uniform machinery for the placement of war cripples. The care committees, while interviewing the man in the hospital, also get in touch with his former

employer. Sometimes a position is thus secured even before the man has started his training, and the latter is then adapted to the requirements of that particular position. But it is not always possible to place a man with his old employer. Some of the larger care committees run employment bureaus of their own. Others turn over to some other agency the man who cannot be taken back to his old position—usually to the regular employment bureaus. Germany has a system of public employment bureaus supported by the municipalities. The bureaus in each state or province are united under a state or provincial directorate, and the directorates in an imperial federation. Some of these had, before the war, special divisions for the handicapped, and others have established them since the outbreak of hostilities. Employers' and workmen's associations are of considerable assistance in the placement of war cripples, especially the Federation of German Employers' Associations, which has been recently formed for this particular purpose, and the many master guilds of handworkers. There are also a number of agencies due to charitable or private initiative.

Finally, there are open to war cripples a very large number of positions in government service. The imperial government has promised that all former employees of the railways, postoffice, and civil service will be reemployed, if not in their old capacity, in a kindred position. These men are to be paid without consideration of their pensions. The postoffice department has decided to give all future agencies and sub-agencies in the rural districts to war cripples, provided they are fit for the positions and want to settle on the land. Many city governments make efforts to take in cripples. There are

reserved for cripples a number of employments under the war department, which through its recently created welfare department attempts also to develop placement activity wherever there is no very active local care committee, publishing twice a week a journal which lists positions open for war cripples.

Both in Austria and in Hungary, re-education is obligatory and entirely controlled by the government. The respective functions of the military and the civil authorities, with regard to the care of the disabled, have been delimited as follows. The military authorities provide the wounded with the first medical assistance, bear the cost of manufacturing and repairing artificial limbs as long as the patient stays in military service, meet the cost of the treatment in non-military institutions, keep the wounded under control until recovery of earning capacity or until discharged as an invalid. After-treatment and vocational re-education are controlled jointly by the military and civil authorities. Placement is entirely under civilian auspices.

The civilian part of the work is controlled by the Ministry of the Interior. However, in view of the great variety of linguistic and economic conditions in the empire, the Ministry has entrusted the care of invalids to the several provincial governments. In the capital of each province a provincial commission was created, for the purpose, among other things, of providing medical care and vocational re-education for war invalids of the province, and of creating the necessary machinery for placement, to administer which an official employment bureau has been created at every provincial capital.

The largest Austrian institution for the care of war invalids is the so-called Reserve Hospital No. 11, in

Vienna. It comprises both an orthopedic hospital and training school. The hospital, which is excellently equipped, receives wounded soldiers whose wounds have been completely healed, and gives them reconstructive treatment. At the same time those who require prosthetic appliances are trained in using them.

After having completed the preliminary orthopedic treatment, every patient is assigned to a workshop. The workshops were at first established in a public school. But later a garden city was created, consisting of forty-two barracks, with a hundred men in each. The shops are now distributed among these barracks.

Altogether about thirty trades are taught, mostly small handicrafts, such as can be carried on in small rural localities. The most important subjects of instruction are the following: wood work (cabinet-making, turning, carpentry), metal work (locksmithing, blacksmithing, brazing, electrical work), bookbinding, basket-making, painting, masonry, plastering, leather work (harness-making, purse-making, orthopedic appliances), tailoring, and shoemaking. In addition to the manual trades, there are courses in bookkeeping, typewriting, arithmetic, and drawing. A course in agriculture is likewise given. There has been put at the disposition of the hospital a private estate, on which practical farm training in agriculture is carried on under the direction of a physician and of a one-armed teacher.

The first object of the re-education is always to return the man to his former trade, and, according to report, this result is attained in all but one case in twenty. Whenever the man can satisfactorily be restored to his former occupation, or when he has to be adapted to some less arduous work in the same line, his re-education is

completed in the hospital school. But in the case of men being trained for a more skilled position in their own trade, or being taught an entirely new vocation—especially the young soldiers who have never before had any industrial training—the courses given in the hospital schools are purely preparatory. Their purpose is to complete the functional restoration of the man, to find for him the most suitable occupation, and to accustom him to the use of his prosthesis. The specialization in skilled trades is left to other institutions, mainly to the regular vocational schools, which, through the cooperation of the Ministry of Public Works and of the various trade associations, offer special facilities for the training of men graduated from the hospital schools.

The schools for invalids are under military control, but their administration is jointly civilian and military. Besides the "medical director," who is a member of the medical corps, there is a "technical director," appointed by the Ministry of Public Works. These two officials act cooperatively as vocational advisers.

The patient leaves the institution only when he is able to return either to the army or to his former occupation in civil life. In the latter case, he is not discharged until the hospital finds for him regular employment. In procuring employment, the hospital cooperates with the public employment office of Vienna, to which it details its own physicians, and a representative of the Ministry of Public Works. In the case of independent landowners or craftsmen, the hospital, before discharging them, makes inquiry to ascertain whether their prospective income is sufficient to their support. A register of all men discharged is kept by the hospital, and their place of employment and earnings are recorded from time to time.

The general tendency in Austria has been to establish large size institutions, on the Vienna model, and to locate them in principal cities, of which there are relatively few in Austria. By the end of 1915, institutions for crippled soldiers existed in Prague, Reichenberg, Troppau, Teschen, Graz, Cracow, Linz, Mehr-Ostran, and in some of the other large industrial cities.

In Hungary, provision for disabled soldiers was organized under several decrees issued in September, 1915. The work was put in charge of a Royal Office for the Disabled. The decrees provide that orthopedic appliances shall gratuitously be supplied. Re-education of disabled soldiers in their former occupation or a new one is obligatory. The treatment and re-education are not to last more than one year.

Special re-examination commissions were established at Budapest, Pressburg, Kolozsvar, and Zagreb, the chairmen and members being appointed by the Premier from medical and industrial circles. Invalids refusing to use prostheses, to submit to the treatment, or to take advantage of the re-education offered, must appear before these commissions. Those who persist in refusal, in spite of the findings of the commission, forfeit all or part of their claim to a pension, excepting only those who have been in active military service for ten years or more.

The Office for the Disabled, in collaboration with the War Ministry, keeps record of all soldiers incapacitated for military service and requiring medical care. It controls all hospitals for the treatment of disabled soldiers, all training schools, all shops manufacturing prostheses and artificial limbs, and all agricultural and industrial training institutions. It supports and supervises all pri-

vate institutions caring for the disabled, and also manages the employment service.

The institutions under the control of the Office for the Disabled are officially divided in three classes: (1) institutions for medical care; (2) shops for the manufacture of prostheses; (3) schools for invalids.

The men are assigned to the different medical institutions by the military authorities. They are received and discharged by the director, upon report by a commission of officials of the hospital.

All the medical institutions were created anew. Organization began at Budapest with four hospitals for 4,500 patients; by the middle of 1916 there was accommodation for over 10,000 in the hospitals of that city alone. In addition to those at Budapest, similar institutions were established at Pressburg, Kolozsvar, Kassa, and several other cities.

Private or commercial initiative failed to provide an adequate supply of artificial limbs. The Office for the Disabled, therefore, established shops for the manufacture of prostheses at the metal trades schools of Budapest and Pressburg. The work is done either by invalids or by soldiers detailed by the military authorities. In the spring of 1916 there came into being a permanent state factory for the replacement and repair of artificial limbs.

Among the schools for the disabled, the largest is that at Budapest, which had 700 pupils at the beginning of 1916. Almost ninety per cent. of the pupils are peasants. The primary object of the re-education is to train independent craftsmen. The classes having the greatest numbers of pupils are those for shoemakers, tailors, harness-makers, cartwrights, locksmiths, and cabinet-makers.

Similar schools are found in Pressburg, Kassa, and Kolozsvar. Alongside of the vocational training, instruction in reading and writing is given to illiterates. Those who have interrupted their elementary or highschool education are given an opportunity to continue it. In some of the schools instruction is also given in typewriting, stenography, and bookkeeping.

At Budapest, at the Institute for the Blind, which has approximately 140 patients, blind soldiers are taught carpet-making, brush-making, massage, and the like.

For the benefit of those men so disabled that they cannot be placed in regular factories or mercantile concerns, special cooperative shops have been created.

It seems that while the work in its medical aspects ranks high, the vocational and economic aspects have been rather neglected. Thus, the regular vocational schools have not been utilized for the re-education of invalids; nor has any opportunity been taken of the different industrial organizations and trade associations. Very little has been done in the way of training in agriculture. The employment service of the Office for the Disabled seems to be organized in a rather bureaucratic way, no cooperation has been asked of either local or trade organizations, and no vocational advisers are employed.

In spite of their preparation, in spite of their forewarning, the Central Powers still have far to go in making adequate provision for the soldiers disabled in their grasp after world empire.

CHAPTER XVI

FOR THE U. S. FORCES

THE situation of the United States with regard to making provision for the disabled soldier is perhaps slightly different from that of the other belligerents. One of the principal causes of difference is the selective influence on the personnel of the military forces of the conscription law.

This legislation has specifically exempted, temporarily at any rate, agricultural workers, highly skilled mechanics, and those who, because of their special qualifications, are necessary to the maintenance of the national interest at home. In Italy and France the situation with regard to the make-up of the army is vastly different. There we find almost all the able-bodied agricultural workers in the service, and battalions of highly skilled mechanics and experienced workmen in uniform.

The problem of refitting for industry the disabled soldiers of the European forces is therefore very unlike that of the United States. Up to the present time the force sent to the front consists practically of men between the ages of twenty-one and thirty-one. This means that the majority of men disabled will not be highly skilled or long experienced in any occupation and thus will be more plastic from the vocational point of view. Past experience has in European practice been the main determinant of training for the future. It may be expected that in many of the American cases this will afford no definite criterion. Either the soldier may have entered

the service direct from school or college or if he has been at work for some time, it is likely to have been in a dozen different jobs of varying character. Many of the men, therefore, can answer definitely to no "former occupation." As has been found in Canadian experience, the soldier when asked his trade will report that for three months prior to the war he worked on a railroad. "Then you are a railroad man?" is the question. "No," is the answer, "for the two months before that I was in a cotton mill, and still earlier drove a delivery wagon for a local firm." In such a case past experience is almost a negligible factor, and the man may properly be restudied vocationally in order that he may be trained in the skilled trade most suited to his qualifications and talents.

An interesting experiment in vocational analysis and allocation has been carried out by the military authorities in classifying drafted men for special lines of army service. The new recruits have been given simple psychological tests prior to their assignment to work as radio operators, oxy-acetylene welders, linemen in the signal corps, drivers or mechanicians in the motor transport service, and so forth. The results have been encouraging and the experience gained will undoubtedly be helpful in further vocational guidance of the men returning for discharge.

In the general process, it is likely that many men who were previously undifferentiated as to occupation, who possibly looked forward to careers as clerks or general utility men, may be directed into skilled trades which will afford to them a much greater financial opportunity, and will contribute more largely to the national stability and efficiency.

The recent wave of interest in the United States in vocational education has put the country in better shape to deal with the instructional requirements of the disabled soldier than would have been the case ten years ago. Although not claiming facilities to compare with those afforded by the fine system of technical institutes in Great Britain, there are in practically every important urban community of America, one or more vocational schools. Industrial education is well provided for by schools, the first of which were founded by private initiative but operated on a non-commercial basis. The later institutions have been established by local educational authorities as part of the public school systems.

Commercial education, to a noteworthy extent, is still in the hands of business colleges which are run as profit-making enterprises. But the work of many of them is efficient to a creditable degree.

Agricultural education has been splendidly provided for by the agricultural colleges and experiment stations maintained by the several states, with assistance, in some instances, from the national government. These institutions have the most modern equipment, expert teaching staffs, and the finest facilities for imparting a practical knowledge of agriculture.

And finally, it must be recalled that practically every American university has industrial departments with shop equipment, which afford to students not only the theoretical, but also the practical, type of instruction. As the war goes on the universities will be drained of students, while the vocational schools whose regular pupils are of younger age, will tend to continue full. In Canada the university plants have been put to good use in the training of disabled soldiers. Even more

extensive facilities of this character are available in the United States.

Prior to the entry of America into the war there had been almost no provision for rehabilitation of the disabled adult. There had been several employment bureaus for cripples, in New York, Boston, Cincinnati, and Philadelphia. These agencies had been struggling bravely, without recourse to training facilities, and with scant public support, to solve the economic problems of the disabled, and were attaining an encouraging degree of success. About five years previous there had been started, but later discontinued, a training school for crippled men.

So in spite of the excellent foundation of general vocational education the United States, at her entrance into hostilities, stood practically without special facilities for the re-education of the disabled. The need of such special provision had been long recognized by workers with the handicapped and was repeatedly discussed in a special journal on cripples which was their organ.

The first move to meet this need was taken the second month after America's declaration of war, when a public-spirited citizen offered to the American Red Cross funds sufficient to establish and maintain in New York City a training school for crippled men. While an original motive of the gift was a desire to make provision which might be helpful to the disabled American soldier, the school was started for crippled men in general, without distinction as to their civilian or military affiliation. Thus came into being the Red Cross Institute for Crippled and Disabled Men.

It became soon evident that this organization had logical responsibilities much wider in scope than the

conduct of a local school of re-education. Legislation making government provision for the training of disabled soldiers did not appear on the statute books until fourteen months after the inception of hostilities, so for a considerable period there was no official agency to which to turn for information and advice. Yet there was wide interest in provision for the disabled soldier. To meet demands from the public for data on the organization, methods, and principles of re-education, as derived from experience abroad, and to provide a scientific foundation for the development of its own activities, the Institute initiated in July, 1917, a department of research. There was early issued a bibliography of the subject, followed by reports on activity in different countries, monographs, and translations, which have been freely distributed for the information of all interested in the subject.

This Institute, which undertook at once the training of crippled industrial workers, has established courses in the manufacture of artificial limbs, oxy-acetylene welding, printing, motion picture operating, jewelry-making, and mechanical drafting. There are also departments of employment, industrial surveys, and public education.

During the incubation of the national program the Red Cross Institute for Crippled and Disabled Men thus served as an experiment station and proving ground, and unofficially met demands upon it to the best of its ability.

In the formulation of the government plans there was considerable difference of opinion as to what authority or authorities should be charged with the responsibility of re-educating the disabled soldier. It was urged on the one hand that the entire task of rehabilitation in all its aspects should be entrusted to the Surgeon General

of the Army; on the other hand that it might be handled by the Bureau of War Risk Insurance—a government department administering family allotments and allowances and the new life and disability insurance, privilege of which was offered to men entering upon military service. A later suggestion advanced by the Council of National Defense was that re-education be entrusted to a commission under the War Department, made up of representatives of all the official and non-official interests concerned. Another proposal which was approved by a conference called by the Surgeon General of the Army at the instance of the Secretary of War, and which was embodied in the draft of a legislative proposal, called for an independent commission of five, composed of representatives of the Surgeon General of the Army, the Surgeon General of the Navy, the Treasury Department, the Department of Labor, and the Federal Board for Vocational Education.

The Administration felt, however, the unwisdom of erecting more independent boards or commissions unrelated to the regular executive mechanism. For this reason it was decided to fix the task on some already existing government department. The one designated in legislation introduced with executive approval, and later enacted, assigned the responsibility of providing for the rehabilitation of the disabled soldier and sailor to the Federal Board for Vocational Education, a body which had been created a year earlier to administer federal aid to vocational education by the states. The bill committing this new function to the Board became law on June 27, 1918.

Meantime, the Surgeon General of the Army had been establishing reconstruction hospitals for the intensive

treatment of physical disablement. In connection with each of these medical centers educational work had been undertaken—with three ends in view. The first was to provide to convalescent patients occupation for therapeutic purposes; the second to provide educational opportunities during the period of invalidism to men who would be returned to the front or discharged without permanent disability; the third to train disabled men whom it was desired to retain in the military organization for special or limited service. In carrying out the two latter aims, the educational departments of the hospitals have entered well within the vocational field.

Important links in the military hospital chain are the reception hospitals at Fox Hills, Staten Island, N. Y.; at Ellis Island, in New York harbor; and at Newport News, Va. At these institutions there are first received from hospital ships or transports all soldiers invalided home from overseas. The men are classified as to treatment need and district of residence, and promptly "cleared" to the appropriate institution.

During the period of hospital or convalescent care the soldier has advantage of physical and occupational therapy administered by a corps of trained workers known as "reconstruction aides" but more familiarly named "blue gowns" on account of their uniform.

Classes in the various military hospitals have already been established. The subjects taught at General Hospital No. 6, Fort McPherson, Atlanta, Ga., for example, are motor mechanics, telegraphy, wireless telegraphy, typewriting, mechanical drafting, cabinet-making, carpentry, harness repairing, poultry raising, reading and writing English, penmanship and bookkeeping, and printing.

When a candidate for discharge from the military forces is so disabled as to entitle him to compensation for disability, his case is discussed with him, while he is still in the hospital, by a vocational adviser of the Federal Board for Vocational Education. He is told that the United States Government will train him free of charge for a new trade. It is entirely optional with the man whether he take advantage of this opportunity for training or not, but every influence is brought to bear to make his decision affirmative.

After the disabled man is discharged from the hospital, he becomes a civilian and his dealings are with the Federal Board and the Bureau of War Risk Insurance.

If the man decides to take a course of training, he is supported during the period of re-education through payment by the Bureau of War Risk Insurance of his compensation for disability or his former military pay, whichever is the greater. During this period the compulsory allotments and allowances to his dependents are continued just as if he were still in military service. He is given instruction that is paid for and supervised by the Federal Board for Vocational Education in one of the schools approved by that body.

The Federal Board for Vocational Education has announced that its provision of re-education will be made, so far as possible, through the use of existing schools, or by placement for training, under a modified system of apprenticeship, with manufacturing or commercial establishments. Special institutions will be founded only where absolutely necessary.

The Board is establishing district offices to decentralize the work, is making training arrangements for current cases, and is following up to their homes men who were

discharged from the army prior to the inception of re-educational activity, and who stand in possible need of training. Local offices are already in operation in New York, Boston, Philadelphia, Cincinnati, Atlanta, Washington, D. C., New Orleans, Minneapolis, Chicago, St. Louis, Dallas, Denver, San Francisco, and Seattle.

After training is complete, the re-educated soldier will be placed in a job by the Federal Board, acting, as provided by the law, in cooperation with the United States Employment Service of the Department of Labor. The Board also includes in its placement function any man physically rehabilitated in an army or navy hospital, whether he be a candidate for retraining or not.

The American Red Cross has offered to the government authorities the facilities of its extensive home service organization throughout the country. This service, directed by the Department of Civilian Relief, can help to align the family as an encouraging force behind the re-education program, can keep the family wheels moving smoothly during the period of training, can provide to the vocational officers much useful information on the home conditions and community record of any individual soldiers, can follow up the case after return to employment, and help in many ways to make the re-education permanently effective.

The actual work of putting the disabled American soldier back on his feet is still in its infancy, and many details still remain to be worked out in experience. But in principle, the United States has followed the best example of her Allies—in accepting provision for the disabled soldiers as a national responsibility to be met at public expense. It is clear that no American soldier

need be dependent upon the alms of charity for his rehabilitation.

But the complete success of the work rests with the people of the United States—upon whether we sympathetically grasp and effectively express in our relations with the graduates of re-education the new spirit of dealing with the disabled—upon whether we sense the glory of restoring the ex-soldier's ability to earn his own living, or whether we continue the old temporary hero-worship and permanent pauperization. The self-respect of self-support or the ignominy of dependence—which shall the future hold for our disabled soldiers? The credit or the blame for the decision will largely rest with the American public.

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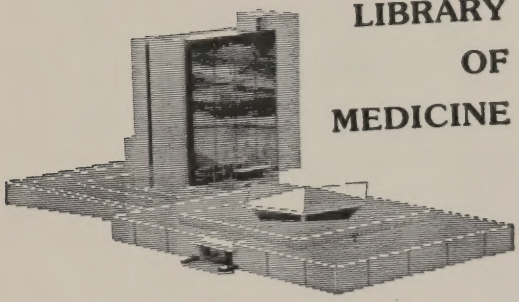
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